12/11/87 S0465-1A

ARIZONA LABOR MARKET INFORMATION NEWSLETTER

Vol. XI No. 11
November 1987

Unemployment Rate

Seasonally Adjusted
September*

ARIZONA	5.7%
Maricopa Co.	4.7%
Pima Co.	4.6%
UNITED STATES	5.9%

Consumer Price Index

National-August 1987
1967 - Base Year

Wage Earner/Clerical Worker -	337.4
% Chg. Yr. Ago	4.3
All Urban -	342.7
% Chg. Yr. Ago	4.3

Phoenix-2nd Qtr. 1987
1977 - Base Year

All Urban -	200.7
% Chg. Yr. Ago	4.2

Tucson-2nd Qtr. 1987
1st Qtr. 1983 - Base Qtr.

All Urban -	119.8
% Chg. Yr. Ago	3.3

* Preliminary

Everything You Always Wanted to Know-- About Wages in Maricopa and Pima Counties

Where are wages generally the highest? Maricopa or Pima County? What occupations are paid the most? Does employment size of a business have any effect on wage levels for the same occupation? What changes wage rates? Why are wage rates higher in one area than another? Do wage levels for the same occupations differ among the industries? Why? This article will present answers to these questions, using data and observations from reports over the last two to three years.

The source materials used are the Small Employer Wage Surveys for Maricopa and Pima counties, Employer Wage Surveys (Large) for Maricopa and Pima counties, Area Wage Surveys for the cities of Phoenix and Tucson, ES-202 Unemployment Insurance Reports, Current Employment Statistics, and 1980 Census data.

According to survey results, Maricopa County establishments generally give the highest remuneration for their workers' services, and large employers in both counties generally pay higher wages than do small employers. Two wage surveys that support these findings are conducted by state government.

Arizona Department of Economic Security
— Moving People Toward Self-Sufficiency

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The Small Employer Wage Survey covers businesses with less than 100 employees and is conducted by the Research Administration of the Department of Economic Security (DES). The survey gathers and reports wages paid to workers in approximately 150 occupations within private establishments.

Begun in 1977 in nearly its present format and methodology, the collection of wage data (from over 1,500 small employers in 1986) is made for August of each year. Job titles in this survey account for over 70 percent of each county's nonagricultural wage and salary employment. The occupational selection, sample construction, and survey methodology are designed to give results that are representative of the occupational and industrial structures in Maricopa and Pima counties.

The Small Employer Wage Survey's wage information is reported for the industrial classifications of manufacturing; construction; transportation, communications, and public utilities (TCPU); wholesale trade; retail trade; finance, insurance, and real estate (FIRE); and services. Within these industries, the occupations are grouped into the categories of managerial, professional, technical, service, maintenance and production, clerical, and sales. A summary occupational table aggregates all the wage data for each of the two counties.

The other survey, called the Joint Governmental Salary Survey, covers establishments with generally 250 or more employees and is conducted by the Arizona Department of Administration. The results of this survey of large employers is also published by DES under the title Employer Wage Survey.

The large employer wage survey collects and reports wages of approximately 85 occupations for private and public firms, in size from 50 to 12,000 employees. Begun in nearly its present format and survey methodology in the early 1970s, the collection of wage statistics is also made for the month of August. According to the Department of Administration, "Employee population surveyed totaled approximately 313,250. The 78 benchmark positions apply to approximately 40,650 employees." The reported wage data are aggregated and reported by occupations gathered from 142 employers in Maricopa County and 33 in Pima.

The small and large surveys' sample and wage collection methodologies are similar. Both use random selection of establishments. Both use stratification of the number of an industry's employers within the sample by their employment participation within the county's total employment. The Small Employer Wage Survey uses the industries' past response rates to determine the number of firms from each industry to be included in the survey. Both surveys ask for a low, weighted average, and high wage paid for the occupations. The Small Employer Wage Survey uses the mail with unknown respondents, while the large one uses mail, personal visits, and follow up. Both surveys are edited in a similar manner.

Only the Small Employer Wage Survey collects data by industry. Of the six industrial classifications of firms reporting in 1986, those in construction and TCPU paid the highest average wage to their maintenance and production workers. Establishments in the services industry paid the lowest. The clerical category of occupations was also paid the highest average wage rate by firms in the construction and TCPU industries. Retail trade businesses paid the lowest for this cluster of occupations.

TABLE 1

WEIGHTED AVERAGE WAGE LEVELS - 1986

	All		Professional		Technical		Maintenance/ Production		Clerical	
	Maricopa	Pima	Maricopa	Pima	Maricopa	Pima	Maricopa	Pima	Maricopa	Pima
Small	$ 9.45	$ 8.13	$13.66	$10.55	$11.69	$ 9.64	$ 7.84	$7.38	$6.90	$6.30
Large	10.68	10.32	14.91	14.41	11.17	10.60	10.02	9.97	7.34	6.97

MARICOPA AND PIMA COMPARISONS

Results from both wage surveys for 1986 are shown in Table 1. The average wage rates of the reported employees are calculated for the occupational categories from the same 28 titles found in the small and large surveys for both counties.

Regardless of establishment size, one will generally earn higher wages in Maricopa than in Pima County. In either Maricopa or Pima County, working for a large firm generally will provide one with greater remuneration. The percentage differences of the occupational categories from Table 1 are given in Table 2.

The calculations for both of these tables are taken from totals of the averages of the same jobs or occupational titles added within a category. These resultant averages are as close an approximation to an occupational group's wage level as can be determined from the available information. Variations in duties and responsibilities, however, do exist within the same occupation in large and small establishments. The two surveys are very similar in methodology and have the same occupational titles, but the occupational descriptions differ.

Another distribution of 22 principal occupations with their weighted average wage levels by occupational cluster is in Table 3. Both surveys used the same methodology, occupational titles, and descriptions. Table 3 compares the categories of managerial, maintenance and production, and clerical.

There are two additional sources that show differences in wage levels between Maricopa and Pima counties. One source is the ES-202 Unemployment Insurance Report of the Department of Economic Security.

The ES-202 Unemployment Insurance Report is a quarterly summation by county of total wages and total employment by industry of all employers who are covered by the Unemployment Insurance program. Approximately

TABLE 2

1986 WEIGHTED AVERAGE WAGE LEVELS - MARICOPA COUNTY PERCENT HIGHER THAN PIMA COUNTY

	All	Professional	Technical	Maintenance/ Production	Clerical
Small	16.2%	29.5%	21.3%	6.2%	9.5%
Large	3.5	3.5	5.4	0.5	5.3

1986 WEIGHTED AVERAGE WAGE LEVELS - LARGE EMPLOYERS PERCENT HIGHER THAN SMALL EMPLOYERS

	All	Professional	Technical	Maintenance/ Production	Clerical
Maricopa	13.0%	9.2%	-4.4%	27.8%	6.4%
Pima	26.9	36.6	10.0	35.1	10.6

TABLE 3

1986 WEIGHTED AVERAGE WAGE LEVELS OF
LARGE EMPLOYERS AND SMALL EMPLOYERS (MARICOPA COUNTY)

	Managerial	%	Maintenance/ Production	%	Clerical	%
Large	$16.57		$9.49		$8.64	
Small	13.02		7.26		7.93	
Difference	$ 3.55	27.2	$2.23	30.7	$ .71	9.0

90 percent of the total nonagricultural employment in Arizona is covered.

In the third quarter of 1986, Maricopa County's average wage for all employees was 10.3 percent higher than Pima County's. In the private sector alone, Maricopa County's average wage was 13.5 percent more than Pima County's. Maricopa County's annual average wage also significantly led Pima County's wage level in 1984 and 1985.

Another wage study, the Area Wage Survey, also points up the difference in the counties' wage levels. This is a wage survey conducted by the U.S. Bureau of Labor Statistics (BLS) since 1965.

BLS surveys 223 establishments to collect the data. This survey covers businesses employing 50 or more workers in manufacturing, TCPU, wholesale trade, retail trade, FIRE, and selected services. The Phoenix and Tucson surveys, including 21 occupations found in clerical and maintenance and production classifications, showed Maricopa County's total wage rate 9.3 percent higher than Pima County's in June of 1986.

CHANGE OVER TIME

The only report in which wage level changes are calculated and reported over a period of time for the various industrial and occupational categories is the Small Employer Wage Survey. Movements of wage rates were calculated from the weighted average wage levels of the same occupations for which there were adequate numbers of respondents in 1985 and 1986.

According to the Small Employer Wage Survey of August 1986, with 151 occupations reported, the weighted average wage level for a typical employee of a small private firm in Maricopa County was $8.68 per hour and that of a maintenance and production worker, $8.42. The 5.2 percent overall increase in the average wage rate in Maricopa County from August 1985 to 1986 compares to a 4.0 percent rise between 1984 and 1985. Groups with large increases in their total weighted average rates for the year ending in August 1986 were the industries of services (10.5 percent), retail trade (9.3 percent), and FIRE (7.2 percent) and the occupational groups of technical (6.4 percent), service (5.9 percent), and maintenance and production (5.0 percent) workers. Low increases were recorded in the industries of wholesale trade (2.8 percent) and manufacturing (3.2 percent) and in the occupational groups of managerial (3.2 percent) and clerical (3.4 percent).

The weighted average wage rate of a small private business employee in the Tucson area, computed from wages of 115 occupations reported in the Pima County Small Employer Wage Survey, was $8.16 per hour in August of 1986. Workers in maintenance and production occupations averaged $7.15 per hour and those in clerical jobs received $6.35 per hour. Other average wage levels were the construction industry ($10.19), with its maintenance and production occupational category ($8.89); the manufacturing industry ($8.07), with its maintenance and production category ($7.19); the retail trade industry ($6.29); and the services industry ($7.11).

Overall, the weighted average wage for the same occupations increased 3.5 percent in Pima County from August 1985 to 1986, while the increase during the previous year had been 2.8 percent. The groups which led in total weighted average rate increases for the year ending August 1986 were the industries of TCPU (12.7 percent), wholesale trade (9.3 percent), and services (8.5 percent) and the occupational categories of managerial (7.7 percent) and clerical (5.3 percent). Declines in the wage level were recorded in the FIRE industry (12.7 percent) and the professional group of occupations (7.0 percent).

The weighted average wage levels for the month of August 1986 of the industrial and occupational groups from the same occupations of Maricopa and Pima counties' private small-firm employees are in Table 4.

Changes in the average wage rates from August 1985 to 1986 for the industrial and occupational groups of the same occupations of Maricopa and Pima counties' private small-firm employees are shown in Table 5.

The large employer wage survey also found an overall wage rate increase for its 78 canvassed occupations from August 1985 to 1986. The total weighted average wages paid increased 4.4 percent in Maricopa County and 4.8 percent in Pima County.

The Area Wage Survey for Phoenix, Arizona, recorded for its 84 surveyed occupations a 6.1 percent increase in total mean wage

TABLE 4

1986 WEIGHTED AVERAGE WAGE LEVELS

Industry	Maricopa	Pima	Occupational Group	Maricopa	Pima
Construction	$11.72	$10.19	Managerial	$13.21	$11.88
Manufacturing	9.67	8.52	Professional	12.68	11.09
TCPU	9.44	8.61	Technical	12.02	10.11
Wholesale Trade	9.02	8.09	Service	4.92	4.79
Retail Trade	7.19	6.14	Maintenance and Production	8.54	7.67
FIRE	9.67	8.03	Clerical	6.99	6.35
Services	7.56	7.21	Sales	9.63	7.36
All Industries	9.20	8.22			

TCPU = Transportation, Communications, and Public Utilities
FIRE = Finance, Insurance, and Real Estate

TABLE 5

PERCENT CHANGE IN WEIGHTED AVERAGE WAGE LEVELS
FROM 1985 TO 1986

Industry	Maricopa	Pima	Occupational Group	Maricopa	Pima
Construction	5.7%	5.5%	Managerial	3.2%	7.7%
Manufacturing	3.2	4.0	Professional	4.6	-7.0
TCPU	6.5	12.7	Technical	6.4	6.5
Wholesale Trade	2.8	9.3	Service	5.9	3.7
Retail Trade	9.3	6.7	Maintenance/Production	5.0	3.1
FIRE	7.2	-12.7	Clerical	3.4	5.3
Services	10.5	8.5			
All Industries	5.2	3.5			

TCPU = Transportation, Communications, and Public Utilities
FIRE = Finance, Insurance, and Real Estate

levels from June 1985 to June 1986. The survey was not conducted in the Tucson area for 1985.

ANALYSIS OF MARICOPA/PIMA DIFFERENCES

Pima County's wage structure is lower than Maricopa's. A look at the economy, labor force makeup, population makeup, and employment picture in each area may give indications as to the reasons for the different wage levels.

The location of Pima County's major city, Tucson, may help to provide support of Pima's lower wage rate base. Unlike Maricopa County and Phoenix, which are situated in the middle of the state, Pima County borders Mexico. Low-wage workers are readily available, and most are willing to travel and relocate to an economy with higher wages.

Data from the 1980 Census show that Maricopa and Pima counties' civilian labor force compositions are quite different. While 88.6 percent of Maricopa County's labor is non-Hispanic, 81.4 percent in Pima County is in that group. Those of Hispanic heritage, therefore, represent 18.6 percent of Pima County's labor force and 11.4 percent of Maricopa County's. Historically, Hispanics have been employed in lower-paying jobs than non-Hispanics. This difference is almost evenly divided in the Hispanic breakdowns by sex. However, the total female civilian labor force composition in Pima County is only 0.3 percent higher than in Maricopa County. The total minority mix of Pima County is 7.6 percent higher than that of Maricopa County. Thus, the civilian labor force ethnic compositions of Maricopa and Pima counties are dissimilar. Table 6 gives the sex and minority breakdowns of the civilian labor force in Maricopa and Pima counties.

Maricopa and Pima counties' industrial employment patterns are also dissimilar. Historically, the manufacturing industry

TABLE 6

CIVILIAN LABOR FORCE BY SEX AND MINORITY STATUS - 1980

	Civilian Labor Force	
	Maricopa	Pima
Total (Both Sexes)	100.0%	100.0%
Non-Hispanic	88.6	81.4
White	83.7	76.1
Black	2.8	2.5
Native American	1.1	1.8
Asian/Pacific Islander	1.0	0.9
Other	0.1	0.1
Hispanic	11.4	18.6
Total Minorities	16.3	23.9
Total (Male)	57.8	57.5
Non-Hispanic	50.7	46.3
White	48.1	43.4
Black	1.5	1.4
Native American	0.6	1.0
Asian/Pacific Islander	0.5	0.5
Other	0.1	0.1
Hispanic	7.1	11.2
Total Minorities	9.7	14.1
Total (Female)	42.2	42.5
Non-Hispanic	37.9	35.1
White	35.6	32.7
Black	1.3	1.2
Native American	0.5	0.7
Asian/Pacific Islander	0.5	0.5
Other	0.1	0.1
Hispanic	4.3	7.4
Total Minorities	6.6	9.8

TABLE 7

EMPLOYMENT BY INDUSTRY - 1986

	Maricopa	Pima
Manufacturing	14.9%	13.1%
Mining	0.1	0.7
Construction	8.9	9.1
TCPU	5.0	3.9
Wholesale Trade	5.7	3.1
Retail Trade	19.4	19.3
FIRE	8.0	5.1
Services	24.8	25.5
Government	13.2	20.2

TCPU = Transportation, Communications, and Public Utilities
FIRE = Finance, Insurance, and Real Estate

has had the highest wage levels due to its strong profit motivation and background of unionization. Other high-paying industries are construction, mining, TCPU, and FIRE. Retail trade and services have historically contained occupations which give them low-based wage structures. Employment numbers from both Current Employment Statistics (CES) and the UI 202 reports point up the industrial strengths and weaknesses of Maricopa and Pima counties' economies. The CES industrial employment percentages for 1986 for Maricopa and Pima counties are in Table 7.

Maricopa County's comparative employment strengths lie in manufacturing, TCPU, wholesale trade, and FIRE. Pima County's relative strengths are in the industries of mining, services, and government. One would have to give the edge to Maricopa County in regard to a higher-wage-based economy, principally due to its manufacturing, FIRE, and TCPU sectors.

Occupational breakdowns from the 1980 Census are in Table 8. Pima County has higher percentages of managerial and professional, technical, service, and craft employees than does Maricopa County. Moreover, two low-wage occupational groups of workers are relatively small in Pima County--clerical and operators, fabricators, and laborers. Thus, the percentage distribution of the occupational groups does not give a strong indicator as to a relative high or low wage structure between Maricopa and Pima counties.

There is support for the idea that the larger the proportion of an area's population that is in the civilian labor force (either employed or actively looking for work) the stronger and more vital is that

TABLE 8

EMPLOYMENT BY OCCUPATION - 1980

	Maricopa	Pima
Managerial and Professional	27.0%	28.0%
Technical	3.4	3.8
Service	12.7	14.7
Craft	12.1	13.1
Operators, Fabricators, and Laborers	16.9	15.0
Office and Clerical	17.4	15.3
Sales	10.5	10.1

economy. Maricopa County has a higher proportion of population in the labor force--51.4 percent. Pima County's percentage for 1986 was 48.0 percent. One more statistic to look at before leaving this subject is that of civilian labor force participation rate. (The civilian labor force participation rate is a percentage of the population 16 and over in the civilian labor force.) The 1980 Census found 61.6 percent of the population 16 and over in Maricopa County participating in the civilian labor force and 57.8 percent in Pima County.

Lastly, how do the industries of Maricopa and Pima counties differ in their wage levels paid to the same occupations? The only source available for these data is the Small Employer Wage Survey. Table 9 gives the 1986 weighted average wage levels for occupations in small firms.

WHAT CHANGES WAGE LEVELS?

A change in the average wage level may result from the changing mix or number of employees in an occupation. This rate can also reflect the general health or strength of an industry or occupation. The average wage level of a job position is also affected by the changing duties and responsibilities of an occupation.

A decrease in the average wage rate may result from a significant addition of new hires at entry-wage levels in an industry or occupation. A growth industry or occupation would fall into this category. A situation, such as early retirement, can cause a decline in the number of higher paid workers within an industry or occupation, leading to a lower average wage rate. A scarcity of prospective employees, as occurs when the unemployment rate is low, may contribute to a rise in the average wage level. A large cutback of short-duration employees with lower wage rates will also result in a higher average wage level for the remaining work force. A declining industry or occupation would give this result. These conditions can and do affect the results of the wage surveys in the short term. The yearly average wage rates from these surveys, however, should reflect what is occurring in the county's economy, employment, work force supply and demand, and wage level conditions over the long term.

Also, economic conditions such as interest rates, foreign and local competition, governmental and union influences, local and national market conditions, consumer attitudes, and business outlook all affect wage movements. Growth or decline in the population of an area and shifts in its mix, as well as changes in the labor force, also have their effects on wage levels.

Everybody expects increases nowadays--in wages, in the price of a house, in the standard of living, in taxes and the cost of living, in the price of a new car, and in the amount of free time. We are just not ready to accept decreases. Nevertheless, some occupations will record average wage declines from year to year. These lower average wage levels are not aberrations due to survey error or faulty survey methodology. A longstanding survey, such as the Small Employer Wage Survey, tends to minimize error.

Thirty-six of the reported 151 occupations of private small employers in Maricopa County dropped in weighted average wage level for the year ending August 1986. More than one-half of these were service and maintenance and production occupations. Some of the job classifications that decreased in their weighted average wage rate from August 1985 to 1986 were: accounting clerk, automobile mechanic, cabinetmaker, cashier, cement mason/finisher, controller, credit manager, day care center worker, groundskeeper, legal secretary, machinist, personnel analyst/officer, production assembler, production supervisor, purchasing officer, and sheet metal worker.

A similar situation occurred in Pima County. There were 115 occupations in Pima County's 1986 wage survey report. Slightly over one-half of the county's 36 average wage rate decreases were in the occupational categories of maintenance and production and services. A partial list of the occupations with lower wages in 1986 includes: buyer, cabinetmaker, cement mason/finisher, custodial worker, electrician, housekeeping

TABLE 9

AVERAGE HOURLY WAGES BY OCCUPATION AND INDUSTRY - 1986

MARICOPA COUNTY	All Industry	Construction	Mfg.	TCPU	Wholesale Trade	Retail Trade	FIRE	Services
Accountant	$13.20	$11.85	$11.48	$13.13			$15.03	
Bookkeeper	8.44	8.97	8.65	7.87	$ 8.15	$ 8.35	8.09	$ 8.59
Branch Manager	20.21	23.51	25.64		16.31	16.38		
Clerk	5.98	6.30	5.47	6.17	6.41	4.82	6.23	5.87
EDP Computer Operator	8.00		6.85	6.99	8.40	6.86	7.70	8.81
Custodial Worker	5.47		5.21	6.70	5.87	4.86	5.55	5.47
Dispatcher	8.61	8.59		10.25	8.67			6.45
Forklift Operator	7.81	9.00	7.21	7.50	7.71			
General Salesperson	10.09	12.45	10.15	9.61	10.96	8.12		
Maintenance Mechanic	10.08	10.40	9.60	10.18				
Office Manager	11.94	11.16	10.89	11.92	11.95		14.02	
Painter	9.08	9.49	7.59					
Payroll Clerk	7.86	8.18	7.41		8.06	7.09		
Personnel Analyst/ Officer	12.63		14.12	13.29	13.51		14.75	11.72
Purchasing Officer	10.96	12.03	10.55	9.34			12.10	
Receptionist	5.97	6.08	5.80	6.01	6.03	5.32	6.32	5.85
Sales Manager	15.48	16.96	18.71			13.85		13.43
Secretary	7.35	7.51	7.04	6.34	6.92	7.03	7.37	7.58
Sheet Metal Worker	10.14	10.80	9.21					
Shipping/Receiving Clerk	6.36		6.49		6.19	6.51		
EDP Systems Analyst	18.28		18.38		12.84			19.95
Truck Driver-Light	6.84	7.43	6.55	8.62	6.07	6.18		5.37

PIMA COUNTY	All Industry	Construction	Mfg.	TCPU	Wholesale Trade	Retail Trade	FIRE	Services
Accountant	$10.68	$10.53	$ 9.35	$ 9.87			$11.47	
Bookkeeper	7.40	7.68	7.72	9.25	$ 7.12	$ 6.65	6.87	$ 7.45
Branch Manager	16.48	20.39	14.02		17.41	12.85		
Clerk	5.65	6.06	5.22	7.33	6.13	4.77	4.91	5.50
EDP Computer Operator	7.31						7.36	8.61
Custodial Worker	5.02		5.01	6.10	5.13	5.15	5.69	4.69
Dispatcher	7.38	8.71		6.94				
Forklift Operator	7.53	8.01	6.95					
General Salesperson	7.71		7.25	7.33	9.95	5.43		
Maintenance Mechanic	9.01	8.74	7.51	11.06				
Office Manager	10.22	10.35	9.37	11.50	10.31		9.73	
Painter	7.38	7.42	6.70					
Purchasing Officer	11.52	14.00	9.81					
Receptionist	5.43	5.37	5.23	6.02	5.48	4.70	5.32	5.59
Sales Manager	13.57	17.19	14.77			13.33		11.51
Secretary	6.51	6.45	6.28		5.44	6.30	5.69	6.87
Sheet Metal Worker	9.45	9.39	10.34					
Shipping/Receiving Clerk	5.81		5.68		6.44	4.66		
Truck Driver-Light	5.61	5.51	6.11	6.47	4.52	4.94		6.13

Mfg. = Manufacturing TCPU = Transportation, Communications, and Public Utilities
FIRE = Finance, Insurance, and Real Estate

cleaner, legal secretary, machinist, office manager, painter, personnel analyst/officer, plumber, production assembler, purchasing officer, and sales clerk.

Five of the 80 occupations in the survey of large employers in Maricopa County recorded lower average wage levels from August 1985 to 1986. These occupations were clerical supervisor, drafting technician, laboratory technician, stores supervisor, and survey instrument technician. However, 20 of the 80 surveyed occupations in Pima County showed decreases. Some of these 20 job classifications were: automotive service worker, clerk, computer programmer, cook, custodial worker, data entry supervisor, EDP systems analyst, laborer, licensed practical nurse, nursing assistant, painter, stores supervisor, and typist.

In Table 10 are the weighted average wage levels for the same occupations from the large and small employer wage surveys of Maricopa and Pima counties for August 1986. A review of this list reveals larger differences in average wage rates between large and small employers in the higher-skilled positions and smaller variations in the lower-skilled ones. This has generally been the case over the years.

TABLE 10

AVERAGE HOURLY WAGES BY OCCUPATION - 1986

Occupation	Maricopa		Pima	
	Small	Large	Small	Large
Accountant	$13.20	$12.77	$10.68	$11.73
Auto Mechanic	9.25	10.96	9.17	11.65
Buyer	11.46	12.44	7.33	12.11
Carpenter	11.03	12.15	8.98	11.83
Cashier	4.48	6.30	4.39	6.81
Civil Engineer	23.08	18.83	11.93	16.92
Clerk	5.98	6.16	5.65	5.57
Cook	5.65	7.10	5.01	6.26
Custodial Worker	5.47	6.59	5.02	5.36
Drafter	10.59	10.65	8.55	10.91
EDP Programmer	14.69	14.95	13.41	13.34
EDP Systems Analyst	18.28	17.12	16.20	15.64
Electrician	9.79	14.83	10.13	12.62
Electronic Technician	9.78	10.42	6.95	10.32
Groundskeeper	5.32	7.42	5.54	7.15
Laborer	7.24	8.61	6.19	9.33
Legal Secretary	9.55	10.39	8.64	9.00
Licensed Practical Nurse	8.21	8.08	6.81	7.57
Nursing Assistant	4.22	5.44	4.40	5.50
Painter	9.08	12.31	7.38	11.17
Personnel Analyst	12.63	13.88	10.90	12.28
Plumber	10.94	11.87	10.28	12.79
Secretary	7.35	8.00	6.51	7.33
Switchboard Operator	5.93	6.23	4.57	6.17
Welder	9.31	12.77	10.21	13.46

In addition to the fact that wage levels differ because of the degree of constraint that an employer has as a result of profit position, union pressure, available monies, and occupational supply and demand, there are basic differences within an occupation's duties due to the job's specific demands, responsibilities, and difficulty. This situation is illustrated in the extent of the wage ranges at the higher-skilled occupational levels, and also by the higher wage levels in the producing industries and in the larger establishments.

Glede Kohler

The Arizona Labor Force in September

Continuing its decline, the unemployment rate dropped to 5.7 percent in September, following the national trend. Paradoxically, the dip in the unemployment rate is not necessarily good news. Both the labor force and employment showed the largest gains of the year. However, this was the result of school faculty and staff returning to work. Total unemployment fell for the third consecutive month, but based on the slowed rate of job growth, this downtrend can be explained by discouraged workers--those who leave the labor force and the ranks of the unemployed because of the difficulty in finding work. Also, the strong job growth in neighboring states is enticing Arizona workers to seek employment opportunities in California and Nevada. This is in line with the reduced population growth this year.

After accounting for school employment, September job growth was minimal. Wage and salary employment shot up by 27,300. However, all but 200 of this gain was school-related. For the fourth month, Arizona created jobs slower than the national average. Despite the below-average employment gains, a recession is not imminent. Job growth, while sluggish, is still positive, personal income is increasing faster than anticipated, and inflation remains moderate.

Construction continues to be the weakest sector in the economy. Another 1,000 jobs were lost in September, for a total of 14,000 jobs lost over the last 12 months. Construction employment is now at its lowest level since December 1984. A turnaround for this industry is not in sight. Interest rates are likely to stay up as the Federal Reserve sustains tighter monetary policy. Unless interest rates drop, single-family housing construction will continue to slow. The glut of apartments and commercial office space is another hindrance to recovery of the construction industry. High vacancy rates paired with slow absorption indicate that there is over a two-year supply of apartments and office space on the market in the metropolitan areas.

After three straight months of expanding, manufacturing employment fell by 200 in September. This drop-off is mostly a result of manufacturers nearing completion of their contracts for defense-related products. With the tight budget situation, the outlook for this industry is not positive. On the other hand, the semiconductor producers are becoming more competitive as the value of the dollar drops. It is forecast that the gain in employment by these producers in the near future will more than compensate the loss by defense-related producers.

Seasonal growth in trade and services is beginning as businesses gear up for the influx of winter visitors and the holidays. Retail trade added 1,500 jobs mainly in apparel, general merchandise, and food stores. Services also grew by 1,500 with 1,300 of these jobs in hotels. At this early stage, it is difficult to determine if the winter tourism season will be strong. Additional demand for hotel and lodging space is often used to forecast this industry. It is estimated that demand for resort and hotel space in the metropolitan areas will increase more than 20 percent in 1987, meaning a good tourism season.

The mining industry has recently shown some strength as the price of copper rises and demand exceeds the short-term supply. Mining employment grew by 100 in September and is up 300 over the last 12 months. With mining operations more cost-effective and capital-intensive, a return to the high employment level of the early 1980s is not likely.

Sluggish economic growth can be expected through year-end. With slowed job growth, the labor market will tighten in the coming months causing the unemployment rate to rise. The outlook for 1988 does not see conditions improving as the national economy falters, the construction industry continues its slide, and population growth slows.

Rosemary Reardon

Arizona Labor Force and Employment

Arizona Labor Force and Employment

September 1987 (in thousands)

	ARIZONA					MARICOPA COUNTY					PIMA COUNTY				
				-- Amt Change --					-- Amt Change --					-- Amt Change --	
	Sep.* 1987	Aug. 1987	Sep. 1986	Aug. to Sep.	1986 to 1987	Sep.* 1987	Aug. 1987	Sep. 1986	Aug. to Sep.	1986 to 1987	Sep.* 1987	Aug. 1987	Sep. 1986	Aug. to Sep.	1986 to 1987
TOTAL CIVILIAN LABOR FORCE**	1636.6	1611.6	1596.1	+25.0	+40.5	1017.7	1001.7	986.0	+16.0	+31.7	314.4	307.2	308.9	+7.2	+5.5
Total Unemployment	92.6	97.3	109.3	-4.7	-16.7	47.9	48.2	55.9	-0.3	-8.0	14.4	14.2	17.2	+0.2	-2.8
Rate	5.7	6.0	6.8	---	---	4.7	4.8	5.7	---	---	4.6	4.6	5.6	---	---
Rate (Sea. Adj.)***	5.7	5.8	6.9	---	---	4.7	4.7	5.7	---	---	4.6	4.6	5.6	---	---
Total Employment	1544.0	1514.3	1486.8	+29.7	+57.2	969.8	953.5	930.1	+16.3	+39.7	300.0	293.0	291.7	+7.0	+8.3

The Above Labor Force Statistics Should Not Be Used for Economic Assistance Programs

NONAGRICULTURAL WAGE AND SALARY EMPLOYMENT BY PLACE OF WORK

NONAGRICULTURAL WAGE AND SALARY EMPLOYMENT BY PLACE OF WORK

	ARIZONA					MARICOPA COUNTY					PIMA COUNTY				
	Sep.* 1987	Aug. 1987	Sep. 1986	Aug. to Sep.	1986 to 1987	Sep.* 1987	Aug. 1987	Sep. 1986	Aug. to Sep.	1986 to 1987	Sep.* 1987	Aug. 1987	Sep. 1986	Aug. to Sep.	1986 to 1987
TOTAL WAGE AND SALARY	1369.6	1342.3	1351.7	+27.3	+17.9	902.4	886.0	886.3	+16.4	+16.1	242.1	235.8	241.5	+6.3	+0.6
Manufacturing	186.5	186.7	187.0	-0.2	-0.5	135.2	135.6	133.5	-0.4	+1.7	30.5	30.5	31.7	+0.0	-1.2
Durable Goods	144.5	144.9	146.0	-0.4	-1.5	106.1	106.6	105.6	-0.5	+0.5	25.0	25.0	26.4	+0.0	-1.4
Stone, Clay and Glass	7.6	7.6	8.1	+0.0	-0.5	4.8	4.8	5.2	+0.0	-0.4					
Primary and Fabricated Metals	15.7	15.6	16.3	+0.1	-0.6	10.5	10.5	10.9	+0.0	-0.4					
Primary Metals	7.3	7.2	7.6	+0.1	-0.3										
Fabricated Metals	8.4	8.4	8.7	+0.0	-0.3										
Machinery	64.4	64.5	65.4	-0.1	-1.0	51.4	51.5	51.8	-0.1	-0.4					
Other Durable Goods	56.8	57.2	56.2	-0.4	+0.6	39.4	39.8	37.7	-0.4	+1.7					
Aircraft and Missiles	26.7	27.2	27.4	-0.5	-0.7										
Lumber and Wood Products (Except Furniture)	8.4	8.3	8.1	+0.1	+0.3										
All Other Durable Goods	21.7	21.7	20.7	+0.0	+1.0										
Nondurable Goods	42.0	41.8	41.0	+0.2	+1.0	29.1	29.0	27.9	+0.1	+1.2	5.5	5.5	5.3	+0.0	+0.2
Food and Kindred Products	9.4	9.3	9.7	+0.1	-0.3	6.2	6.2	6.2	+0.0	+0.0					
Apparel	4.4	4.4	4.6	+0.0	-0.2	3.1	3.1	3.1	+0.0	+0.0					
Printing and Publishing	16.2	16.4	15.4	-0.2	+0.8	11.3	11.6	10.9	-0.3	+0.4					
All Other Nondurable Goods	12.0	11.7	11.3	+0.3	+0.7	8.5	8.1	7.7	+0.4	+0.8					
Mining and Quarrying	11.2	11.1	10.8	+0.1	+0.4	0.6	0.6	0.6	+0.0	+0.0	1.7	1.6	1.6	+0.1	+0.1
Copper Mining	8.5	8.4	8.1	+0.1	+0.4										
Other Mining and Quarrying	2.7	2.7	2.7	+0.0	+0.0										
Construction	102.9	103.9	113.9	-1.0	-11.0	68.9	69.5	78.1	-0.6	-9.2	20.6	20.8	22.4	-0.2	-1.8
Trans., Communications, and Public Utilities	70.6	70.6	67.7	+0.0	+2.9	48.0	48.0	45.1	+0.0	+2.9	9.8	9.8	9.8	+0.0	+0.0
Transportation	31.9	31.9	31.1	+0.0	+0.8	22.1	22.1	20.8	+0.0	+1.3	4.8	4.8	4.9	+0.0	-0.1
Communications and Public Utilities	38.7	38.7	36.6	+0.0	+2.1	25.9	25.9	24.3	+0.0	+1.6	5.0	5.0	4.9	+0.0	+0.1
Trade	331.3	329.4	324.0	+1.9	+7.3	225.9	224.9	220.3	+1.0	+5.6	54.5	54.1	53.8	+0.4	+0.7
Wholesale Trade	63.9	63.5	63.2	+0.4	+0.7	51.2	51.0	50.8	+0.2	+0.4	7.6	7.5	7.3	+0.1	+0.3
Retail Trade	267.4	265.9	260.8	+1.5	+6.6	174.7	173.9	169.5	+0.8	+5.2	46.9	46.6	46.5	+0.3	+0.4
General Merchandise and Apparel	43.3	42.7	41.2	+0.6	+2.1	28.6	28.1	26.5	+0.5	+2.1	7.2	7.0	7.1	+0.2	+0.1
Food Stores	42.7	42.1	40.9	+0.6	+1.8	27.9	27.4	26.7	+0.5	+1.2	7.0	6.9	6.8	+0.1	+0.2
Automotive and Service Stations	32.2	32.2	31.7	+0.0	+0.5	20.2	20.4	20.2	-0.2	+0.0	5.4	5.4	5.4	+0.0	+0.0
Eating and Drinking Places	93.8	93.7	92.9	+0.1	+0.9	59.5	59.8	59.0	-0.3	+0.5	17.8	17.7	17.6	+0.1	+0.2
Other Retail Trade	55.4	55.2	54.1	+0.2	+1.3	38.5	38.2	37.1	+0.3	+1.4	9.5	9.6	9.6	-0.1	-0.1
Finance, Insurance, and Real Estate	91.4	91.5	90.2	-0.1	+1.2	72.0	72.0	71.2	+0.0	+0.8	12.8	12.8	12.4	+0.0	+0.4
Services and Miscellaneous	338.6	337.1	328.4	+1.5	+10.2	228.4	227.0	219.8	+1.4	+8.6	62.6	62.1	61.3	+0.5	+1.3
Hotels and Other Lodging Places	34.0	32.7	31.0	+1.3	+3.0	18.7	17.8	16.6	+0.9	+2.1	5.9	5.5	5.5	+0.4	+0.4
Business Services	74.7	74.6	74.2	+0.1	+0.5	60.1	59.8	59.5	+0.3	+0.6	11.0	11.1	11.1	-0.1	-0.1
Health Services	84.7	84.4	81.4	+0.3	+3.3	55.6	55.2	53.1	+0.4	+2.5	17.9	18.0	17.3	-0.1	+0.6
Other Services	145.2	145.4	141.8	-0.2	+3.4	94.0	94.2	90.6	-0.2	+3.4	27.8	27.5	27.4	+0.3	+0.4
Government	237.1	212.0	229.7	+25.1	+7.4	123.4	108.4	117.7	+15.0	+5.7	49.6	44.1	48.5	+5.5	+1.1
Federal	43.1	43.3	41.7	-0.2	+1.4										
State and Local	194.0	168.7	188.0	+25.3	+6.0										
School	111.6	84.5	108.6	+27.1	+3.0										

* Preliminary
** Labor force, unemployment, and employment are reported by place of residence.
*** Normal seasonal variations have been eliminated to reflect underlying economic trends.
NOTE Prepared in cooperation with the U.S. Department of Labor, Bureau of Labor Statistics.

-- Prepared by Arizona Department of Economic Security,Research Administration (CPS, 1/87)

Nonmetropolitan Counties
Labor Force and Employment
September 1987

	Apache	Cochise	Coconino	Gila	Graham	Green-lee	La Paz
TOTAL CIVILIAN LABOR FORCE*.	15,375	36,725	42,475	13,075	8,300	3,325	4,750
Total Unemployment	1,825	2,600	2,875	1,375	725	275	450
Rate	11.9%	7.1%	6.8%	10.5%	8.7%	8.3%	9.5%
Rate (Seas. Adj.)**. . . .	12.8%	7.3%	7.8%	10.7%	8.9%	8.8%	-INA-
Total Employment	13,550	34,125	39,600	11,700	7,575	3,050	4,300

THE ABOVE LABOR FORCE STATISTICS SHOULD NOT BE USED
FOR ECONOMIC ASSISTANCE PROGRAMS

	Apache	Cochise	Coconino	Gila	Graham	Green-lee	La Paz
TOTAL WAGE AND SALARY. . . .	15,825	24,475	37,800	10,650	4,900	3,075	2,975
Manufacturing.	875	1,625	2,800	1,475	200	25	100
Mining and Quarrying	25	100	75	1,275	0	1,575	0
Construction	1,375	1,225	1,975	275	200	450	175
Trans., Comm., & Pub. Util..	2,025	1,400	2,475	425	150	25	100
Trade.	1,425	5,450	8,550	2,250	1,275	225	1,025
Fin., Insur., & Real Estate.	325	650	875	300	125	25	100
Services and Miscellaneous .	4,650	4,050	9,650	2,025	875	150	675
Government	5,125	9,975	11,400	2,625	2,075	600	800

	Mohave	Navajo	Pinal	Santa Cruz	Yavapai	Yuma
TOTAL CIVILIAN LABOR FORCE*.	30,375	26,975	37,275	9,775	36,575	39,575
Total Unemployment	2,100	2,500	3,800	1,600	1,750	8,475
Rate	6.9%	9.3%	10.2%	16.4%	4.8%	21.4%
Rate (Seas. Adj.)**. . . .	7.1%	10.6%	10.0%	14.4%	5.1%	-INA-
Total Employment	28,275	24,475	33,475	8,175	34,825	31,100

THE ABOVE LABOR FORCE STATISTICS SHOULD NOT BE USED
FOR ECONOMIC ASSISTANCE PROGRAMS

	Mohave	Navajo	Pinal	Santa Cruz	Yavapai	Yuma
TOTAL WAGE AND SALARY. . . .	20,350	20,425	28,175	8,150	23,525	24,750
Manufacturing.	2,625	1,925	3,650	1,300	2,525	1,725
Mining and Quarrying	425	1,125	3,625	0	600	50
Construction	1,350	1,150	1,175	325	2,050	1,625
Trans., Comm., & Pub. Util..	1,125	1,750	1,100	475	875	850
Trade.	5,925	3,875	4,750	2,925	6,300	6,825
Fin., Insur., & Real Estate.	900	375	750	300	950	975
Services and Miscellaneous .	4,300	5,100	3,900	1,250	5,100	5,875
Government	3,700	5,125	9,225	1,575	5,125	6,825

*Adjusted to the Current Population Survey (CPS) to reflect place of residence.
**Seasonal adjustment not applicable for economic assistance programs.

NOTE--Series for Yuma and La Paz counties start January 1983. Data are not comparable to any past series.

Prepared in conjunction with the U.S. Department of Labor, Bureau of Labor Statistics.

Arizona Labor Force and Employment for Economic Assistance Programs
September 1987

County	Civilian Labor Force	Employment	Unemployment	Rate
Statewide	1,636,684	1,544,038	92,646	5.7%
Apache	15,373	13,552	1,821	11.8
Cochise	36,731	34,125	2,606	7.1
Coconino	42,483	39,609	2,874	6.8
Gila	13,056	11,692	1,364	10.4
Graham	8,303	7,579	724	8.7
Greenlee	3,337	3,053	284	8.5
La Paz	4,740	4,297	443	9.3
Maricopa	1,017,724	969,826	47,898	4.7
Mohave	30,364	28,267	2,097	6.9
Navajo	26,990	24,478	2,512	9.3
Pima	314,382	299,979	14,403	4.6
Pinal	37,292	33,487	3,805	10.2
Santa Cruz	9,758	8,170	1,588	16.3
Yavapai	36,581	34,834	1,747	4.8
Yuma	39,570	31,090	8,480	21.4

These figures are the only official BLS labor statistics to be used for revenue sharing purposes. They are not designed to be used as economic indicators. Note: Series for Yuma and La Paz counties start January 1983. Data are not comparable to any past series.

Arizona Unemployment Insurance Activities
August 1987

	August 1987	July 1987	August 1986	% Change From One Year Ago
Claimants Served*	33,970	35,551	34,440	-1.4%
Average Weeks Unemployed**	9.5	8.4	9.4	1.5%
Benefits Paid*	$ 12,354,841	$ 14,914,841	$ 12,979,766	-4.8%
Trust Fund Balance	$422,578,042	$407,406,358	$389,574,307	8.5%

*All Programs **UI Only

Estimated Hours and Earnings of Production Workers in Selected Industries
Arizona

INDUSTRY	AVERAGE WEEKLY EARNINGS SEP.* 1987	 AUG. 1987	 SEP. 1986	AVERAGE WEEKLY HOURS SEP.* 1987	 AUG. 1987	 SEP. 1986	AVERAGE HOURLY EARNINGS SEP.* 1987	 AUG. 1987	 SEP. 1986
FOR THE STATE OF ARIZONA									
Manufacturing	402.20	408.18	408.36	40.1	40.9	41.0	10.03	9.98	9.96
Aircraft & Missiles	529.94	526.23	INA	42.6	42.2	INA	12.44	12.47	INA
Food & Kindred Products . .	397.54	402.86	414.67	42.7	43.6	42.4	9.31	9.24	9.78
Primary Metals	454.65	466.28	487.58	35.0	36.6	39.1	12.99	12.74	12.47
Machinery	396.76	394.21	360.91	39.4	39.9	38.6	10.07	9.88	9.35
Copper Mining	503.66	492.48	506.17	40.1	40.6	40.3	12.56	12.13	12.56
Construction	406.21	418.96	433.78	35.2	36.4	36.3	11.54	11.51	11.95
Utilities	600.50	620.06	622.80	41.5	43.0	43.1	14.47	14.42	14.45
Retail Trade**	257.56	248.83	236.80	33.8	33.4	32.0	7.62	7.45	7.40
Wholesale Trade	387.69	390.06	383.60	39.2	39.4	40.0	9.89	9.90	9.59

Estimated Hours and Earnings of Production Workers in Selected Industries
Maricopa County

INDUSTRY	AVERAGE WEEKLY EARNINGS SEP.* 1987	 AUG. 1987	 JULY 1987	AVERAGE WEEKLY HOURS SEP.* 1987	 AUG. 1987	 JULY 1987	AVERAGE HOURLY EARNINGS SEP.* 1987	 AUG. 1987	 JULY 1987
FOR MARICOPA COUNTY									
Manufacturing	424.13	438.48	426.21	40.9	41.8	41.1	10.37	10.49	10.37
Construction	420.50	427.21	441.97	35.1	35.9	36.8	11.98	11.90	12.01
Retail Trade**	277.49	274.12	277.23	34.3	33.8	34.1	8.09	8.11	8.13
Wholesale Trade	390.33	393.90	390.87	38.8	39.0	38.7	10.06	10.10	10.10

Estimated Hours and Earnings of Production Workers in Selected Industries
Pima County

INDUSTRY	AVERAGE WEEKLY EARNINGS SEP.* 1987	 AUG. 1987	 JULY 1987	AVERAGE WEEKLY HOURS SEP.* 1987	 AUG. 1987	 JULY 1987	AVERAGE HOURLY EARNINGS SEP.* 1987	 AUG. 1987	 JULY 1987
*****FOR PIMA COUNTY*****									
Manufacturing	352.43	356.66	364.17	38.1	38.6	38.7	9.25	9.24	9.41
Copper Mining	526.26	511.24	511.66	41.8	41.7	41.7	12.59	12.26	12.27
Construction	359.20	367.37	363.91	35.6	36.7	36.5	10.09	10.01	9.97
Utilities	561.70	579.83	562.38	41.0	42.2	42.0	13.70	13.74	13.39

* Preliminary

** Excludes eating and drinking places.

NOTE--These estimates are based on a sample of full and part-time production and related employees whose payroll and hours are reported for the pay period which includes the 12th of the month. Prepared in cooperation with the U.S. Department of Labor, Bureau of Labor Statistics.

--Arizona Department of Economic Security, Research Administration. (1972 SIC, 1/87)

Arizona Works!

In what is being characterized as Arizona's answer to welfare reform, the Department of Economic Security (DES), together with the Department of Education and various Job Training Partnership Act (JTPA) agencies throughout Arizona, is implementing a comprehensive employment and training delivery system to prepare Aid to Families with Dependent Children (AFDC) applicants and recipients to obtain jobs and become self-sufficient.

What is unique about ARIZONA WORKS!? Traditional welfare programs have all too often failed to recognize that welfare dependency can be prevented by strengthening the family and by providing opportunities for education, training, and work. ARIZONA WORKS! will target three groups of AFDC applicants and recipients: 1) Teen parents, 2) Long-term AFDC recipients, and 3) Older AFDC recipients whose youngest child will turn 16 and soon disqualify them from welfare. A major aim of ARIZONA WORKS! is to focus on the AFDC client who traditionally has an extended period of time on welfare and to break this cycle of dependency.

Using existing resources, the state will implement comprehensive service programs in the Phoenix and Tucson metropolitan areas in DES offices. In Phoenix, the ARIZONA WORKS! office will be located at 1224 South Seventh Avenue. In Tucson, ARIZONA WORKS! staff have been assigned to each of the Job Service offices. The balance of the state will be served through cooperative arrangements between the DES Job Service and JTPA agencies.

How does ARIZONA WORKS operate? Briefly, in Maricopa and Pima counties, the model will focus on specific client populations who are either required to register for work programs (mandatory registrant) or who live in designated areas (established by zip code). During the initial visit to an ARIZONA WORKS! office, the client's skills and abilities will be assessed. Specific orientation programs for developing or enhancing job-ready skills, together with follow-up programs, are part of the job placement component of ARIZONA WORKS!. Target group applicants will be served by the "case management" model. Using a time-proven method of individualized client service, the AFDC client will be guided and prepared for transition away from welfare dependency. While the philosophy of ARIZONA WORKS! is positive, clients who fail to comply with the requirements of the program will face sanctions which could impact their receipt of benefits.

AFDC recipients and applicants who reside in Maricopa and Pima counties, but outside designated areas, will be assisted by another service delivery model. In this system, the primary service will be to assist as many individuals as possible to secure employment. The DES Family Assistance Administration (FAA) will refer AFDC applicants and recipients to the Job Service for this purpose. Individuals requiring training in order to become employable will be referred to JTPA to access training opportunities. Finally, in the balance of state and in recognition of special problems faced in these areas, JTPA agencies will fulfill dual roles of providing training and job placement when there are no Job Service offices within the rural community.

DES is sincerely interested in working with the employer community and hearing its comments and suggestions. If you would like to be a part of Arizona's team committed to welfare reform, or wish to visit an ARIZONA WORKS! office, please contact Gloria Young at (602) 255-1783 or Ruby Smalls at (602) 255-4020.

Ben Levine
Employment and Training Administration

Average Annual Pay

Alaska had the highest average annual pay ($28,442) of any state in the nation in 1986. South Dakota had the lowest--$14,477. Arizona ranked 22nd among all of the states and the District of Columbia, according to recently released preliminary data from the U.S. Bureau of Labor Statistics.

Arizona's average annual pay of $18,870 in 1986 represents a 4.6 percent increase over 1985. Only ten states had a percent change greater than Arizona's. The average change for the United States was 4.0 percent, with a range of -0.9 percent for Alaska and 6.6 percent for Massachusetts.

Average annual pay varies widely by industry. Workers tend to earn the highest pay in mining and the lowest in retail trade. This held true for Arizona in 1986. Mining employees averaged $30,217. That figure, however, was a decrease of 1.5 percent from 1985. All of the other industries showed increases, leading to a 4.5 percent change overall in Arizona's private-sector employee pay.

Retail trade employees in Arizona had average annual pay of only $11,492. These workers, however, are often part-time employees. That situation leads to an overall low annual pay for the industry because of the method of calculating these data. Average annual pay is computed by dividing total annual payrolls of employers by the average monthly employment.

These data are compiled from reports submitted by employers covered by Unemployment Insurance (UI) laws for over 98 million workers nationwide. Included in the payroll data are bonuses, the cash value of meals and lodging when supplied, tips and other gratuities, and employer contributions to certain deferred compensation plans such as 401(k) plans.

Major exclusions from UI coverage include most agricultural workers on small farms, all members of the Armed Forces, elected officials in most states, most railroad employees, most domestic workers, most student workers at schools, employees of certain small nonprofit organizations, self-employed individuals, and all unpaid family members.

Certain factors should be taken into consideration when comparing average annual pay levels between states or industries. Average annual pay is affected by the number of individuals in high-paying and low-paying occupations, by the ratio of full-time to part-time workers, and by the fact that an individual may not be employed by the same employer all year or may work for more than one employer.

Barbara Keene

ARIZONA AVERAGE ANNUAL PAY

	1985	1986	1985-1986 Change
Private Industry	$17,555	$18,351	4.5%
Mining	30,682	30,217	-1.5
Construction	19,732	20,598	4.4
Manufacturing	23,524	24,786	5.4
Transportation, communications, and public utilties	24,237	24,954	3.0
Wholesale trade	21,899	22,849	4.3
Retail trade	11,123	11,492	3.3
Finance, insurance, and real estate	20,873	22,582	8.2
Services	15,487	16,337	5.5
Government	20,528	21,559	5.0

SOURCE: *News*, U.S. Bureau of Labor Statistics, USDL 87-377, September 1, 1987.

STATES RANKED BY 1986 ANNUAL PAY

Rank	State	1985 Annual Pay	1986 Annual Pay	1985-1986 Change
1	Alaska	$28,694	$28,442	-0.9%
* 2	District of Columbia	26,160	27,137	3.7
3	New York	21,901	23,200	5.9
4	Michigan	21,884	22,720	3.8
5	Connecticut	21,226	22,516	6.1
6	New Jersey	21,077	22,309	5.8
7	California	20,948	21,995	5.0
8	Illinois	20,600	21,452	4.1
9	Massachusetts	19,627	20,925	6.6
10	Colorado	19,570	20,275	3.6
11	Maryland	------	20,121	----
	UNITED STATES	**19,189**	**19,966**	**4.0**
12	Texas	19,616	19,934	1.6
13	Ohio	19,433	19,902	2.4
14	Washington	18,964	19,645	3.6
15	Delaware	19,146	19,639	2.6
16	Minnesota	18,818	19,630	4.3
17	Pennsylvania	18,650	19,404	4.0
18	Indiana	18,501	19,024	2.8
19	Virginia	18,264	18,972	3.9
20	Wyoming	18,950	18,969	0.1
21	Missouri	18,338	18,915	3.1
22	**ARIZONA**	**18,037**	**18,870**	**4.6**
23	Georgia	17,916	18,746	4.6
24	Nevada	18,179	18,739	3.1
25	West Virginia	18,005	18,405	2.2
26	Oklahoma	18,196	18,345	0.8
27	Oregon	17,837	18,322	2.7
28	New Hampshire	17,205	18,303	6.4
29	Louisiana	18,216	18,290	0.4
30	Wisconsin	17,594	18,202	3.5
31	Hawaii	17,336	18,101	4.4
32	Kansas	17,334	17,934	3.5
33	Utah	17,577	17,863	1.6
34	Rhode Island	16,864	17,733	5.2
35	Florida	16,961	17,679	4.2
36	Tennessee	16,987	17,661	4.0
37	Alabama	17,023	17,638	3.6
38	Kentucky	16,941	17,357	2.5
39	New Mexico	16,989	17,301	1.8
40	North Carolina	16,226	17,001	4.8
41	Vermont	16,023	16,857	5.2
42	Idaho	16,358	16,602	1.5
43	South Carolina	15,948	16,600	4.1
44	Iowa	16,097	16,598	3.1
45	Maine	15,428	16,326	5.8
46	Arkansas	15,553	16,162	3.9
47	Nebraska	15,616	16,106	3.1
48	Montana	15,932	16,085	1.0
49	North Dakota	15,588	15,778	1.2
50	Mississippi	14,951	15,420	3.1
51	South Dakota	13,988	14,477	3.5

SOURCE: News, U.S. Bureau of Labor Statistics, USDL 87-377, September 1, 1987.

New Developments

"New Developments" is featured each month as a service to employers and job seekers. It is a compilation of public announcements of the more significant new construction, grand openings, major hirings and layoffs, and other employer events that have special significance for Arizona labor markets. The announcements are paraphrased and otherwise edited from articles published in newspapers and other periodicals from throughout the state. "New Developments" is limited to space available, and no attempt is made to compile an exhaustive list of all such events that have occurred during the month.

EDUCATION - CyCare Systems Inc. of Phoenix has established the CyCare Unity Fund to provide scholarships for financially disadvantaged students, with special emphasis on minorities. Intended to celebrate the company's 20th anniversary, the fund has an initial endowment goal of $1 million. Applications will be accepted January 1, 1988. More information can be requested from Carol Smith, Administrative Assistant, CyCare Systems Inc., 4343 East Camelback Road, Suite 320, Phoenix, Arizona 85018.

TRADE - Annual shopping center retail sales in Arizona total $11.6 billion and account for 84 percent of nonautomotive retail sales in the state, according to the International Council of Shopping Centers. The shopping centers provide 171,000 jobs or about 13 percent of Arizona's employment, the highest percentage of any state. Arizona has 680 shopping centers with an additional 61 under construction.

Eateries Inc., based in Oklahoma City, is planning to open from eight to ten Garfield's Restaurant and Pub locations in Arizona. With turn-of-the-century furnishings, the restaurants will feature a 75-item menu with sandwiches, prime rib, and seafood; full bar service; and seating capacity of 140 to 175.

Great Western Systems Inc. will be putting in a $9 million autoplex on 26 acres at 56th Street and Warner in Tempe. Expected to be completed by next summer, the autoplex will house more than 25 firms offering auto-related services and products. The anchor tenant will be an auto-auction amphitheater.

Ground will soon be broken for an $11 million retail center, Glendale Galleria, being built on 19.4 acres northeast of 59th and Peoria avenues. The 200,000-square-foot center is scheduled for completion within 10 to 12 months after construction begins.

A $10 million renovation and expansion has begun on the Goldwaters flagship store at Scottsdale Fashion Square, Camelback and Scottsdale roads. Expected to be completed by late 1988, the project includes the construction of a 96,000-square-foot addition and renovation of the interior and exterior of the existing building.

Arthur's Apparel Associates Inc. is planning to open its third and fourth Phoenix-area ClotheSmart stores this fall and up to nine more in Phoenix and Tucson through 1988. Specializing in junior and misses brand-name apparel, each store will employ 25 to 30 employees.

Allen Hospitality Corp. of Salt Lake City will soon be opening a Mullboon's restaurant at 1538 East Southern in Tempe. Three additional sites are also being planned for the Valley, including two in Scottsdale and one in Mesa. Each restaurant will employ from 90 to 110 employees and will feature a menu of seafood, steaks, duck, and other dishes.

Hanson's Quality Foods has opened its eighth grocery store in the Valley and is planning to open three more before Thanksgiving. The 9,000- to 12,000-square-foot stores offer fresh produce; fresh meats and seafoods; and health, gourmet, and dried foods. Also available is a large selection of bulk foods.

Kay Jewelers is moving its western region credit office to Tempe. Located at 1150 East University Drive, the office will handle collections and credit approvals for Kay Jewelers outlets in Arizona and eight other states.

CONSTRUCTION - Sonoran Heights, a subdivision of 264 homes at 128th and Cholla streets in Scottsdale, is under construction. The homes will range in size from 2,800 to 3,700 square feet and be priced from $210,000 and $350,000. Thirty acres of the site will be left in its natural desert state.

Construction has begun on the $27.8 million Sun Valley Parkway, a 28-mile link between Interstate 10 and Bell Road in Surprise. Scheduled for completion in 1989, the six-lane highway will run from the Palo Verde interchange around the west side of the White Tank Mountains and then east to Bell Road.

Construction is underway on the Three Gateway Office Building in the First Gateway Center at 44th and Van Buren streets in Phoenix. The 11-story building will feature a two-story atrium, an eleventh floor lobby with a skylight, and a glass exterior. The project should be completed next summer.

Camelback Fountains, a $21 million project of residential and office buildings in Phoenix, will be built in two phases. Beginning in December, the first phase will consist of a 60,000-square-foot three-story building with frontage on Camelback Road and should be completed in the fall of 1988. The 85,000-square-foot, second-phase building will also have three levels and frontage on 32nd Street. The residential component will include 50 condominiums.

Carver Development Co. of Newport Beach, California, has begun construction on a $7 million garden office complex which will house its new Phoenix branch office. The two-story complex will occupy 11.8 acres in the Southbank business park, located just south of Sky Harbor Airport at 32nd Street and Interstate 10. Completion is targeted for the first quarter of 1988.

The Phoenix City Council has approved the building of three bicycle routes totaling 27 miles in the Maryvale, Moon Valley, and Encanto neighborhoods. The cost of $80,000 will cover bike signs, painting stripes along the streets to designate bike right of way, and curb cuts. City officials hope to build 392 miles of bike routes and paths by the year 2000 at a cost of $9.6 million.

Scottsdale's Westminster Village Inc. is building a full-service life care retirement community at the southeast corner of Cactus and Pima roads. Construction of the 250-unit complex should be complete by next summer.

Construction has begun on a 594-car parking garage at 100 East Boston Street in Chandler. Scheduled for completion in December, the garage is Chandler's first parking structure and is part of the city's downtown redevelopment efforts.

DEVELOPMENT - The city of Williams is turning four blocks of its downtown area into a historic district. The city is burying utility wires, removing traffic lights, adding brick sidewalks and old-fashioned street lamps, and remodeling store fronts. At the same time, a $1.89 million state road project is refurbishing the Interstate 40 business loop through Williams. The city hopes to be able to attract more tourists from the interstate.

Sasser Ltd. is planning a 324-acre community with 8,787 homes, condominiums, and an elementary school. The development, Boulder Mountain Highlands, will be located in the Desert Uplands region of Mesa.

MANUFACTURING - The annual survey of manufacturing climates conducted by Grant Thornton has ranked Arizona seventh in the nation. The study ranks each state based on state and local tax policies and incentives to businesses, state-regulated employment costs, labor costs, availability of resources, and selected quality of life issues. The Southwest was ranked first among the eight U.S. regions.

Croft Metals Inc., the second-largest private employer in Lake Havasu City, has ceased manufacturing operations there. About three-quarters of the 200 employees have been laid off. The manufacturer of aluminum window and door frames, however, will continue to warehouse inventory at the Lake Havasu City plant.

The American Electronics Association has found that Arizona's electronics firms had the nation's lowest employee-turnover rate in the industry during 1986. The Arizona rate was 9.5 percent, compared to the national average of 16.4 percent. Texas electronics firms had the highest turnover, followed by Orange County, California; metropolitan New York; and Oregon.

Phoenix-based Excel Industries Inc. has opened a Tucson facility in the Continental Business Park on Interstate 10 between Ina and Cortaro roads. The 63,000-square-foot plant provides kitchen and bath cabinets, laminated counter tops, and a variety of cultured-marble products. The Tucson facility currently employs 75 workers and plans to hire an additional 75.

Loral Defense Systems of Litchfield Park has been awarded a $29.4 million contract by the Air Force to build 17 transportation-and-handling systems for the Minuteman intercontinental ballistic missiles. The nine-axle transporter-erector vehicles are expected to be delivered from August 1988 to May 1989.

Tucson Molding Co. has opened in Tucson with 45 employees at the Midvale Park Commerce Center, near Interstate 19 and West Valencia Road. The firm manufactures wood moldings and finished trim products for the building industry.

Garrett Turbine Engine Co. of Phoenix has laid off about 600 employees, nearly 10 percent of the company's work force. The layoffs were made because of the continued slump in the general aviation industry and the end of government contracts to build auxiliary power units for the Air Force's B-1B bomber and engines for the T-46 jet trainer. Some of the terminated workers may be placed in the four other Garrett divisions in Arizona.

Hughes Aircraft Missile Systems Group of Tucson has been awarded a $134.8 million contract by the Navy for the production of 153 Phoenix missiles. The AIM-54C Phoenix long-range, air-to-air missiles are expected to be delivered between October 1988 and June 1989.

HOTELS AND RESORTS - Construction is nearing completion on a $4 million ballroom expansion at Marriott's Camelback Inn, 5402 East Lincoln Drive in Phoenix. Part of the resort's $16 million, two-year renovation program, the ballroom will be able to accommodate up to 2,300 persons for receptions, 2,200 for meetings, and 1,600 for banquets.

Construction is also underway on a $5 million health spa featuring a multi-purpose gym, a body and beauty center, and a special restaurant serving nutritious and low-calorie food. The spa should be completed in the fall of 1988.

Hyatt Development Corp. is planning to build a resort hotel on about 50 acres in the Tortolita Mountain area. Located northwest of West Tangerine and North Thornydale roads, the 400-room hotel eventually will be expanded to 600 rooms. Construction is scheduled to begin next year.

Scheduled for completion in May 1988, a $6.2 million Quality Suites Hotel is under construction in Flagstaff. The 102-suite hotel will be located on a 2.9-acre site at 706 South Milton Road. Each two-room suite will have an entertainment center equipped with an AM/FM cassette player and a video tape recorder.

A $44 million convention center is being planned for Cave Creek to accommodate large corporations that need the full-time attention that many resort hotels are unable to provide. The center, to be located on 35 acres off Cave Creek Highway on Rancho Manana Road, will consist of 45 percent meeting space. An employer would pay about $245 per person per night to keep 60 people in the center for three days. Included are three meals a day, two coffee breaks, conference rooms, and sleeping accommodations. The Center will offer a high-tech array of video equipment along with a staff of six to eight who can make laser charts and graphs at a moment's notice. Also available will be video tapes of meetings and computers that tap into home office systems.

The $7.7 million Windmill Inns of Surprise is under construction at 12545 West Bell

Road near the entrance to Sun City West. The three-story hotel, featuring 127 suites, two conference rooms, and a ballroom, will open in January.

DISTRIBUTION FACILITY - Mendenhall Distribution Co. is building a cooler and distribution facility for produce at San Luis. The 15,000-square-foot cooler will chill newly harvested vegetables and fruits and store them at temperatures in the mid-30s. Trucks from Mexico will have a special-access driveway from the border gate that leads to the facility. Delays in bringing produce across the border will be reduced because the trucks will not have to wait in line at the port of entry, and customs inspections could be done at the facility. Twenty-five to 30 workers will be employed at the cooler.

MINING - Cyprus Minerals Co. has begun extracting gold at the Cyprus Copperstone mine near Quartzsite. Morrison-Knudsen Co. Inc. is providing contract mining services with 52 employees to remove overlying rock and mine the ore. Cyprus's own 36 employees will grind the ore. Projected annual output is 60,000 ounces of gold.

FINANCE, INSURANCE, AND REAL ESTATE - Magna Mortgage Company is establishing its Western Division Regional Headquarters at Fountainhead Corporate Park in Tempe. The 14-year-old company's business is primarily first mortgage loans on homes.

Blue Cross and Blue Shield of Arizona is building a headquarters project at the southeastern corner of Pinnacle Peak Road and Interstate 17. The project will feature 523,000 square feet of space in five buildings ranging in height from two to ten stories.

The company is also developing a medical mall on 80 acres near the headquarters site. The mall will feature a hospital, a hotel, a hospice, a long-term-care center, a surgical center, medical-research offices, and retail stores.

A 50,000-square-foot addition and major refurbishing of the existing Sunland Regional office of State Farm Insurance Cos. in Tempe is currently underway. The $4 million project will expand the space for the firm's data processing and stock room.

According to Arizona State University's Real Estate Center, the number of homes sold in the Phoenix metropolitan area during the second quarter of 1987 (16,530) was the second highest quarterly total of the 1980s.

TRANSPORTATION - The Sun Tran city bus service in Tucson has adopted a transit center system. Within the near future, the bus service will revolve around a network of four major transit centers located at key activity centers in the southwest, east, northwest, and downtown areas. Advantages of a transit center system include the flexibility to accommodate varied commute and travel patterns, the ability to precisely time connections and transfers, a variety of amenities, and an off-street location for passengers to wait and board.

JOB ASSISTANCE - The U.S. Department of Labor has awarded a $400,000 grant to the Job Training Partnership Act program to assist former workers in Douglas. The grant will help to educate, retrain, and relocate employees who were laid off from the closures of the Phelps-Dodge Smelter, RJR Nabisco Inc. chile canning plant, and Billy the Kid Shirt Co.

COMMUNICATIONS - American Telephone & Telegraph Co. (AT&T) has begun hiring employees to fill 600 openings at the company's new Mesa billing office. The jobs are entry level and involve clerical work, data entry, and forms processing. The expansion will allow AT&T to take over long-distance billing operations next year. Currently, AT&T pays other companies such as Mountain Bell to do the billing.

The Papago Tribal Utility Authority has purchased the telephone system on the Tohono O'Odham Indian Reservation from Mountain Bell. Using the latest in telephone technology, the system will be expanded to provide service to about 55 villages. The $8.4 million expansion should be complete by the end of 1988.

Arizona Labor Market Newsletter
LABOR MARKET INFORMATION PUBLICATIONS
Site Code 733A
P.O. Box 6123
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ARIZONA LABOR MARKET INFORMATION NEWSLETTER

Vol. XI No. 12
December 1987

Unemployment Rate

Seasonally Adjusted
October*

ARIZONA	5.6%
Maricopa Co.	4.7%
Pima Co.	4.5%
UNITED STATES	6.0%

Consumer Price Index

National-September 1987
1967 - Base Year

Wage Earner/Clerical Worker - 339.1
% Chg. Yr. Ago 4.4

All Urban - 344.4
% Chg. Yr. Ago 4.3

Phoenix-3rd Qtr. 1987
1977 - Base Year

All Urban - 201.7
% Chg. Yr. Ago 4.1

Tucson-3rd Qtr. 1987
1st Qtr. 1983 - Base Qtr.

All Urban - 120.6
% Chg. Yr. Ago 3.7

* Preliminary

Arizona Work Force 2000

Arizona has experienced tremendous growth over the last few decades, developing from a rural agricultural-based economy into a dynamic industrial-based economy. The composition of Arizona's economy will continue to change, but the state's growth will continue to be vibrant as the year 2000 approaches. Important factors contributing to continued growth include:

- Expected strength of the U.S. economy between 1988 and 2000.
- Accelerated growth of service industries.
- Manufacturing employment maintaining its share of the Arizona economy despite its decline nationally.
- Steady increases in population creating an ample labor supply.

Under the most likely scenario for the U.S. economy, the key trends are: an improving trade balance due to further devaluation of the dollar and productivity gains in U.S. manufacturing, a declining government deficit, inflation continuing at moderate rates, and increasing disposable income.

Economic growth depends on an improvement in the trade balance. The declining dollar has invigorated export growth and muffled import growth. Increasing prices of import goods have caused consumers to curtail their purchases, while the export market has become more lucrative for domestic

Arizona Department of Economic Security
— Moving People Toward Self-Sufficiency

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producers as the dollar drops. The trade balance will become more favorable as the value of the dollar is projected to continue its decline relative to other currencies. This improved trade position will vary greatly industry to industry. In Arizona, the manufacturing industry will see the greatest gains from the rebound in U.S. exports.

The trend of strong productivity growth in manufacturing observed recently is expected to continue through the year 2000. The productivity growth rate for the next decade is projected to be double the rate over the last decade. Competition with exports for market share, both here and abroad, has induced producers to improve quality and productivity. Despite the drop in the dollar and the consequent increase in exports, U.S. manufacturers must continue to increase productivity to regain and maintain their market share to ensure a reduction in the trade deficit.

In the near term, the federal deficit is not expected to decline. Beyond 1990, with changes in fiscal policy, economists predict the federal deficit will edge downward. Because the spending cuts of the 1986 tax laws have failed to shrink the deficit, increased taxes will be likely under the new administration.

Implementing the "correct" fiscal policy will be more difficult in the future because of the growing interdependencies between the U.S. and international economies. The United States cannot raise taxes without considering the tax policies of other countries. To remain competitive in the world market, U.S. tax rates cannot be greater than rates in other countries over an extended period of time. Also, the United States (as well as other governments) will be required to raise revenues from less mobile tax bases due to the mobility of capital and labor between countries. Given these conditions, experts indicate the most likely revenue sources for the federal government are consumption taxes. Raising consumption taxes will reduce the deficit and help the savings-investment imbalance without aggravating the trade balance. This occurs because consumption taxes encourage savings and investment while discouraging consumption. The United States will be producing more than it consumes, helping the trade balance.

If the federal deficit declines, the country should see decreasing interest rates and increasing consumer confidence. These two factors will further strengthen the expanding economy.

The outlook for inflation and disposable income is also favorable. The average inflation rate over the next ten years is anticipated to be lower than the previous ten years. In the short term, however, inflation is expected to increase. Overall, prices should not grow much faster than 5 percent before declining in 1990.

There are risks to the inflation forecast such as oil price shocks from the volatile situation in the Middle East, import inflation as the dollar declines, and escalating wages.

Disposable income will increase steadily through the 1990s, but at a slightly slower rate than in the 1980s. The actual growth rate will depend on the fiscal policy program initiated by the new administration.

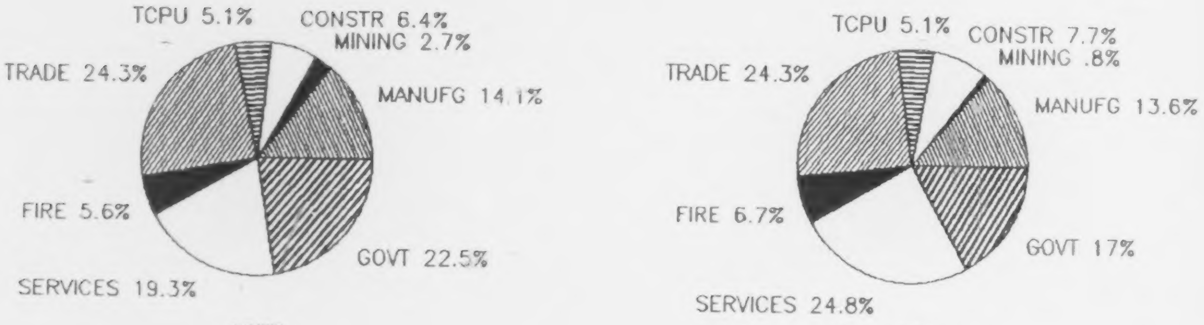
With a healthy U.S. economy, the outlook for Arizona is excellent. Historically, Arizona outperforms the national economy in expansionary periods. (Refer to the graphs on page 4.) Therefore, the state is projected to maintain strong economic growth through 2000, with overall wage and salary employment growing around 4 percent annually. Arizona's relatively strong population growth will strengthen the construction industry and also fuel growth in trade and services. Employment in mining will actually decline, but this does not mean output will drop. The mining industry is becoming more capital intensive and, in the process, reducing employment levels while maintaining output. The industries with the strongest growth potential are manufacturing and services.

Nationally, manufacturing employment and its share of the economy are projected to decline over the next decade-and-a-half. These decreases will be caused by productivity gains in manufacturing and growth in other sectors of the economy. Despite production increases, the number of manufacturing jobs will decline as productivity growth outpaces output growth. Also, as the output of other sectors grows, manufacturing's share of the economy will fall. Even with the drop in the value of the dollar and the growing competitiveness of American manufacturing firms in world markets, manufacturing is unlikely to give a big boost to U.S. GNP or employment over the next 13 years.

In Arizona, on the other hand, manufacturing employment and its share of total employment are expected to increase through the year 2000. The state's manufacturing strength stems from its large high tech base. About half of Arizona's manufacturing employment is in high tech industries such as computers, aerospace, and electronic components. Nationally, high tech firms maintain a much smaller share of manufacturing employment, and heavy manufacturing a larger share of employment, than in Arizona. Even though high tech employment excluding aerospace) and output are anticipated to increase through 2000 in the United States, this will not offset the decline in heavy manufacturing employment.

The outlook for the semiconductor portion of high tech manufacturing in Arizona is excellent through 2000. With the decline in the dollar, firms are becoming more competitive and, as a result, their exports

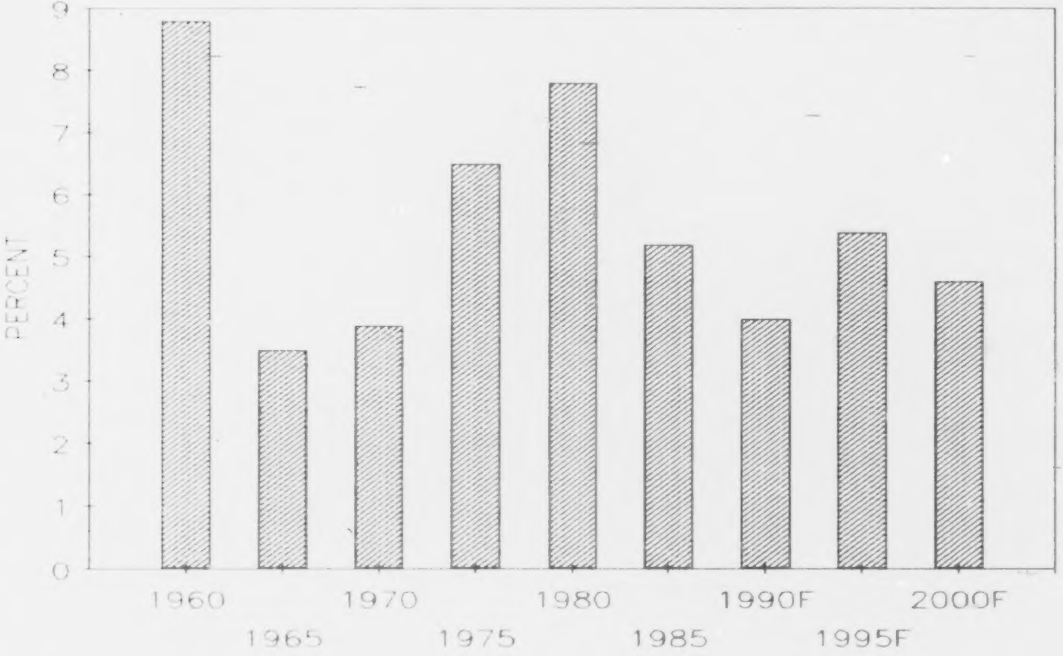
ARIZONA EMPLOYMENT SHARES BY INDUSTRY, 1977 – 1987



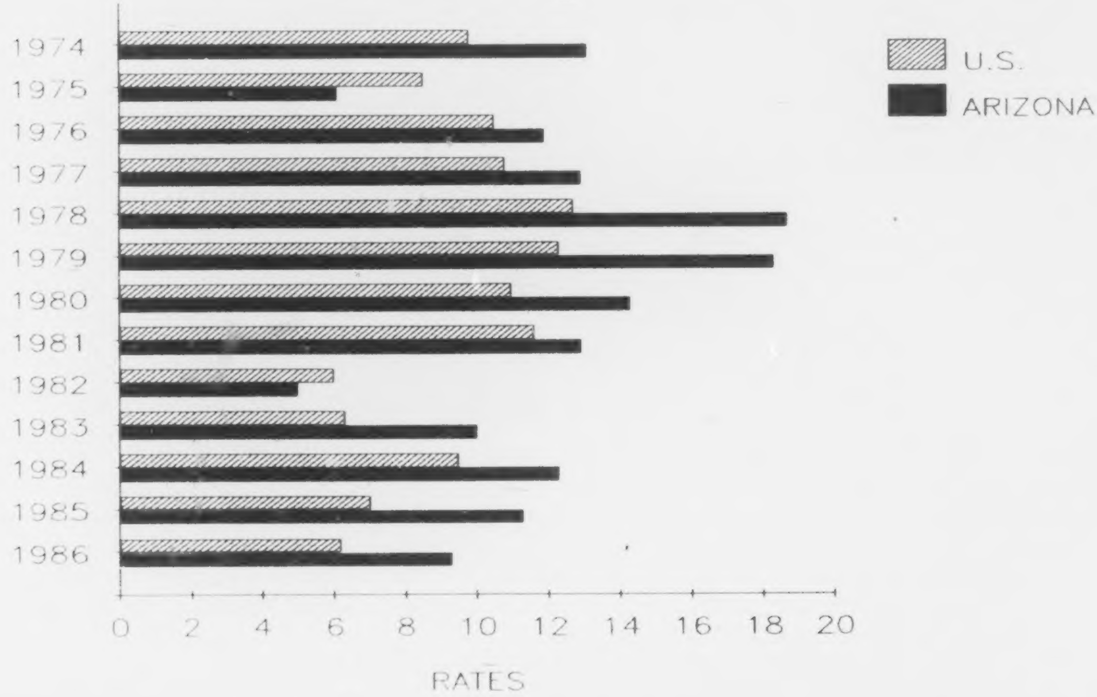
1977

1987

ARIZONA WAGE AND SALARY EMPLOYMENT AVERAGE ANNUAL GROWTH RATES 1960 – 2000



U.S. VERSUS ARIZONA PERSONAL INCOME GROWTH RATES 1974 – 1986



are increasing. As the industry climbs out of its recent slump and expands output, firms will hire more workers. High tech plants in Arizona are likely to be among the first to gear up as they already have the plant capacity and the state has an experienced and growing labor force.

The picture for the aerospace component of Arizona's high tech manufacturing is not as optimistic. Military spending has slowed recently, causing cutbacks in the defense-related aerospace industry. It is likely that this trend will continue, although with a new administration coming into office in 1989, it is difficult to predict what direction this industry will take.

Nearly 150,000 manufacturing jobs will be created in Arizona between now and the year 2000. With virtually all of the manufacturing output exported out of the state, the continued growth of this sector gives an extra boost to the state's economy.

Mirroring the U.S. economy, the strongest employment growth in Arizona will occur in the service industries. Over 300,000 new service jobs will be created in Arizona between now and the year 2000. Most will be in the health and business-related fields. The gain in health service jobs is a result of population growth and the aging of the population. As the population ages, it will require more medical care. Also, the proliferation of outpatient care centers and health maintenance organizations is creating additional health service jobs. Business support services such as data processing, personnel services, and temporary agencies are expected to lead the business service industries. In addition to business and health services, household-related services will grow as the labor force participation rate of women climbs.

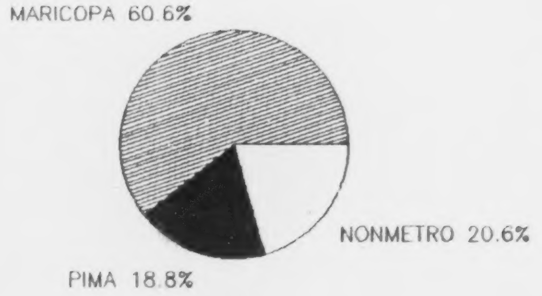
Historically, service occupations have been low-skilled, low-wage positions, but this is changing. The skill level required for service-sector jobs has and will continue to increase. Jobs in this fast-growing industry will require more education as jobs become more sophisticated and demanding. The service occupations which require the most education will be the fastest growing. In Arizona, service occupations with high growth potential are computer programming, nursing, medical technology, and personnel management.

Healthy national and state economies will boost tourism and tourist-related employment in Arizona. As incomes grow and the value of the dollar remains low, foreign and out-of-state visitors will be attracted to the Grand Canyon and destination resorts in Phoenix and Tucson. Increased recreational travel within the state will bring tourist dollars and employment to the White Mountain and Colorado River areas. Occupational opportunities will be created for retail clerks, food service workers, and hotel personnel, among others.

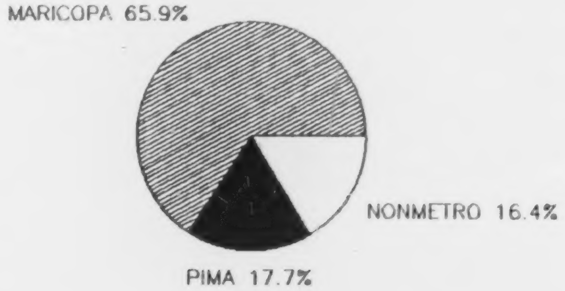
While the job outlook for the state as a whole is bright, the rural areas could be overshadowed by the major metropolitan areas. If current growth trends continue, Phoenix and Tucson will receive over 80 percent of the new jobs created between now and 2000. However, the economies of the nonmetropolitan counties are becoming more diversified, reducing the disparity between the rural and urban counties. For example, Yuma County is becoming less reliant on the volatile agriculture industry as its manufacturing base grows. Yuma County is an attractive location for firms with its comparatively low wages, access to Interstate 8, and proximity to California and Mexico. The county's location on the Mexican border also makes twin plants a possibility for manufacturers. Despite slow employment growth in recent years, the outlook is good through the year 2000. Coconino is another nonmetropolitan county which is diversifying, increasing its manufacturing base to become less dependent on the seasonal tourism industry. Efforts should be made to attract industry to all areas of the state to ensure balanced growth.

In addition to the expanding economy, changes in population and the demographic composition of the labor force will have a profound impact on employment and jobs through the year 2000. The effects of these changes will be more prevalent in the nation as a whole than in Arizona.

WAGE AND SALARY EMPLOYMENT SHARES
METRO VERSUS NONMETRO
1977 – 1987



1977



1987

Over the next decade and a half, the U.S. population is projected to grow at a rate of 1 percent or less per year. This means that the nation's population growth will be the slowest since the Depression. The projected declining population growth rate reflects an anticipated drop in births in the United States.

In Arizona, on the other hand, the population is expected to grow between 2.5 and 4.0 percent annually. The state's healthy population growth will continue to be fueled by strong in-migration. Job opportunities will be the biggest factor attracting people to Arizona--over 60 percent of the migration into Arizona during the next 13 years will be employment-related.

The two primary factors that determine labor force growth are changes in the population and in labor force participation rates. As stated above, Arizona's population growth will be much stronger than the nation's. This growth, combined with the increasing labor force participation rates of women and minorities, will account for annual labor force increases of about 4 percent. The nation's labor force is projected to increase at a rate of 1 percent annually through 2000. Arizona's labor force growth will get a lift from the growth in the number of young workers. In Arizona, the number of younger workers will grow between 2 and 3 percent annually over the next 13 years. While the growth of younger workers in Arizona has slowed from previous years, the number of workers in the 16-24 age group in the United States is expected to decline 8 percent by 2000. Arizona should have sufficient labor supply to fill entry-level positions and be attractive to firms interested in relocating.

Arizona's work force in the year 2000 will contain larger shares of women and minorities. This is also the result of the climbing labor force participation rates of these groups and the growing share of minorities in the population. Arizona's trend is consistent with the nation's. Traditionally, women and minorities tend to hold low-skill jobs with low pay. While the slower growing total work force and expanding job opportunities might be expected to improve opportunities for these workers, the new jobs being created in the economy will require more technological expertise than the jobs that exist today. Because women and minority workers are, in general, less likely to have had satisfactory schooling and on-the-job training, they may be prevented from taking advantage of these future opportunities.

With relatively slower population growth and rapid growth in high-skill jobs, it will be a challenge to maintain the necessary labor force. Maintaining an ample labor supply in which workers have the education and skills that match new jobs will ensure continued economic expansion. If workers' skills do not match those required in new jobs, economic growth will slow. Youth, women, and Hispanics are three key groups that can help Arizona meet the challenge of creating a large and skilled work force.

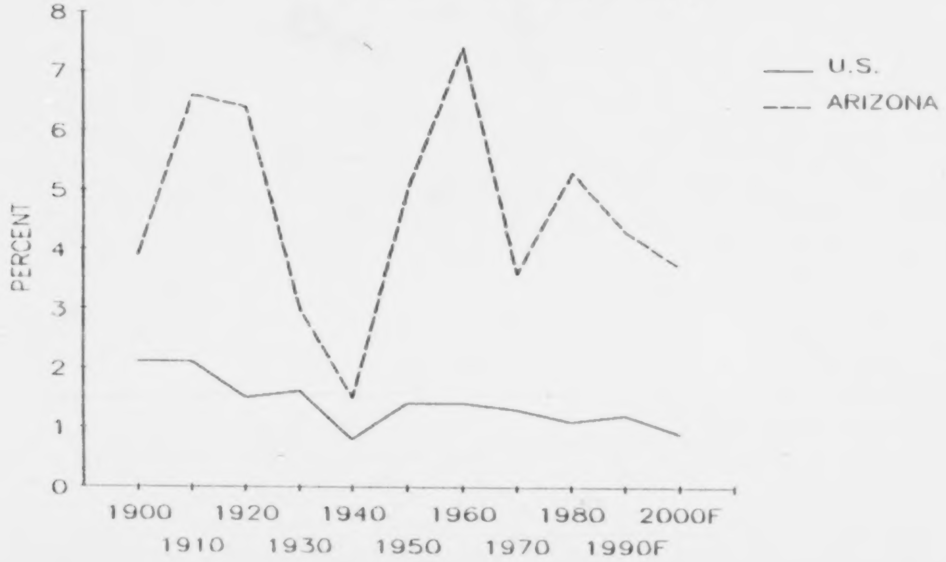
Arizona will have the good fortune of a growing youth population to take over entry-level positions vacated by "baby boomers" progressing in their careers. The relatively large supply of jobs that will be available for these younger workers should lower this group's high unemployment rate. However, the unemployment rate will only drop if employers find these workers suitable for jobs and hire them. To meet the needs of employers, youth must be encouraged to remain in school. The high school dropout rate in Arizona is very high. Economic progress will be hindered if the rate is not lowered in the future because youth will be a vital portion of a slower growing labor force. Traditionally, dropouts have the most difficult time finding employment, and this problem will be exacerbated in the future with new jobs requiring more skills.

In addition to keeping youth in school, schools must raise standards and revise curricula to prepare students for the work force and the higher skill levels that will be required. The state, employers, and individuals will all benefit from an educated and skilled youth labor supply.

Over the next decade-and-a-half, women will continue to enter the labor force in large numbers. It is estimated that 47 percent of the work force will be women and 61 percent of women will work.

Much of the growth in the number of women in the work force is due to the increased labor force participation of women with small children. In 1960, only 11 percent of U.S. women with young children worked; today, that number has grown to 52 percent. In less than 20 years, the pattern of

U.S. VERSUS ARIZONA POPULATION GROWTH RATES, 1900 – 2000 ANNUAL AVERAGES



employment in the United States has changed drastically, from one in which most married women stayed home to one in which nearly everyone is paid to work. Because so much of this change has occurred so rapidly, society has not adjusted to all of the implications of the large increase of women in the labor force. Because women are and will continue to be a vital part of the work force, there is a need to make it easier for them to stay in the work force and encourage others to enter. More flexible working hours and quality day care at the work place are two solutions.

While women have recently been making large gains in the share of managerial and professional positions they hold, they continue to be concentrated in the traditionally female occupations which pay less than men's jobs. To prepare these women for the jobs of the future, they will also need education and training to get into higher-skilled and higher-paid positions. The earnings differential between men's and women's wages has begun to narrow, and this trend should continue through the year 2000.

Hispanics, Arizona's largest minority group, have been the fastest growing segment of the population. Typically, Hispanics have held low-skill/low-wage jobs or high-wage blue collar positions. Unfortunately, the number of these blue collar positions is declining. Training and education will also be the key to keeping Hispanics in the labor force and helping them reach income parity with the rest of the work force. Traditionally, Hispanics have been more likely to drop out of school. Reasons behind the high Hispanic dropout rate are academic and behavioral problems, language barriers, and financial problems. Bilingual and bicultural programs could help resolve some of the academic and behavioral problems and remove some of the language barriers. Also, economic assistance programs could help some Hispanic families keep their children in school. Reducing the dropout rate is the first step to increasing Hispanics' job and income potential. Hispanics will make up a large portion of the labor force in the future, and that future labor force will require training in new technologies. Arizona's standard of living may be threatened if greater investment in Hispanics is not made today.

Education and training will, undoubtedly, be important for all groups in the labor force. Over 50 percent of new jobs are expected to require some college education, creating great opportunities for anyone with some college. On the other hand, without education or training for high-skill jobs, there will be growing economic inequality.

For Arizona, the economic outlook is bright. Between now and the year 2000, over one million jobs will be created compared to 665,000 in the 1975 though 1987 period. The job growth will come from many sources. As the economy improves, Arizona's existing firms will expand creating job opportunities. The healthy economy along with the Arizona business climate will attract new employers to the state, adding even more jobs. For two years in a row, Inc. Magazine has ranked Arizona first among the 50 states in terms of business climate. The job growth will attract in-migrants, and, as the population grows, demand will increase for services and construction, creating employment opportunities in these areas. Therefore, the future sees job growth throughout the Arizona economy with services, manufacturing, and construction showing the strongest growth.

Despite the strong growth in job opportunities, the labor force must be prepared to undertake the more highly-skilled jobs that will exist in the future for economic growth to be sustained. Because the labor force will be growing at a slower rate, state and local governments, as well as the private sector, must implement policies that will encourage minorities, youth, and women to acquire necessary skills to enter and remain in the labor force. An abundant, well-educated, and skilled labor force is the key to economic growth in the future.

Rosemary Reardon

The Arizona Labor Force in October

In October, the month that brought us "black Monday" at the stock exchanges, Arizona's unemployment rate eased down another tenth of a point. Twelve hundred dropped from the unemployment rolls, and nearly 26,000 residents acquired new jobs. Arizona's newly employed owe their good fortune to the season; certainly, not to the turn of the stock market.

Thanks to gains by government, services, and retail trade, 14,800 wage and salary jobs were created in October. More than half of those (8,400) were additional staff and work-study students hired by colleges, universities, and the rest of the school system.

Services registered a better-than-average October gain (4,000) principally by hotels, business services, amusements, and miscellaneous services. That speaks well of the expectations of the tourist industry for this winter season. On the other hand, retail trade had the weakest October gain since 1982, suggesting. expectations by department and apparel stores of an anemic season.

The construction industry's continuing downward direction was more in keeping with the tone of the stock market crash. Construction employment has fallen in 13 of the last 15 months. At 101,400 in October, it is at a level not seen since December 1984. From peak construction employment in July 1986 of 117,500, construction has declined by 16,100 jobs, a shrinkage of 13.7 percent. The prognosis for construction is also poor.

Construction's future depends on the population's perception of their financial well-being. Since the stock market crash, many people's perception of their financial health has turned negative. Others are going to wait and see what the significance of the crash is. The effect of these assessments may cause large numbers of people to postpone purchases of large-ticket items. House purchases could suffer the greatest declines. If they do, construction industry employment will continue to spiral downward.

Other current circumstances hold out some hope for the construction industry. Mortgage interest rates are gradually declining as the Federal Reserve eases up on the money supply in reaction to the falling stock market. Some home buyers may consider this a window of opportunity to buy a house before inflation accelerates from the falling value of the dollar relative to other currencies, and subsequent action by the Federal Reserve to buoy up the dollar by raising interest rates.

One might expect some growth of manufacturing employment as the dollar falls and America's products become more competitive, but manufacturing lost 500 jobs in October. Manufacturing's employment level is now 1,100 below the August 1986 peak when 187,200 were employed.

The remaining industries were flat in October with the notable exception of transportation, communications, and public utilities (TCPU). TCPU employment increased 800, and three out of four of those jobs were in the transportation component. This, too, was normal seasonal growth primarily attributable to hiring by package delivery services in anticipation of the Christmas rush. Although October mining employment was also flat, the outlook for the industry has improved. The price of copper has risen above $1.00 a pound which raises the potential for profit. Nevertheless, any employment increases will be small, because copper mining companies now have more labor-efficient methods for extracting the metal.

The near-term employment outlook depends on how freely consumers will spend during the Christmas season in the aftermath of the stock market decline. Consumer psychology, monetary policy actions of the Federal Reserve, and fiscal actions of Congress will all play major roles in the economy's direction from here.

Ron Simon

Arizona Labor Force and Employment

Arizona Labor Force and Employment

October 1987 (in thousands)

	ARIZONA					MARICOPA COUNTY					PIMA COUNTY				
				-- Amt Change --					-- Amt Change --					-- Amt Change --	
	Oct.* 1987	Sep. 1987	Oct. 1986	Sep. to Oct.	1986 to 1987	Oct.* 1987	Sep. 1987	Oct. 1986	Sep. to Oct.	1986 to 1987	Oct.* 1987	Sep. 1987	Oct. 1986	Sep. to Oct.	1986 to 1987
TOTAL CIVILIAN LABOR FORCE**	1658.4	1633.7	1610.8	+24.7	+47.6	1034.7	1016.8	996.8	+17.9	+37.9	317.9	313.1	312.8	+4.8	+5.1
Total Unemployment	91.2	92.4	109.0	-1.2	-17.8	48.2	47.8	56.6	+0.4	-8.4	14.5	14.3	18.0	+0.2	-3.5
Rate	5.5	5.7	6.8	---	---	4.7	4.7	5.7	---	---	4.6	4.6	5.8	---	---
Rate (Sea. Adj.)***	5.6	5.7	6.9	---	---	4.7	4.7	5.7	---	---	4.5	4.6	5.7	---	---
Total Employment	1567.2	1541.3	1501.8	+25.9	+65.4	986.5	969.0	940.2	+17.5	+46.3	303.4	298.8	294.8	+4.6	+8.6

The Above Labor Force Statistics Should Not Be Used for Economic Assistance Programs

NONAGRICULTURAL WAGE AND SALARY EMPLOYMENT BY PLACE OF WORK

NONAGRICULTURAL WAGE AND SALARY EMPLOYMENT BY PLACE OF WORK

TOTAL WAGE AND SALARY	1384.7	1370.5	1364.3	+14.2	+20.4	913.8	903.1	896.1	+10.7	+17.7	244.4	241.9	242.9	+2.5	+1.5
Manufacturing	186.1	186.6	186.5	-0.5	-0.4	135.1	135.2	133.4	-0.1	+1.7	30.3	30.5	31.3	-0.2	-1.0
Durable Goods	144.9	144.6	145.6	+0.3	-0.7	106.5	106.1	105.7	+0.4	+0.8	25.0	25.0	26.0	+0.0	-1.0
Stone, Clay and Glass	7.6	7.6	8.1	+0.0	-0.5	4.7	4.8	5.3	-0.1	-0.6					
Primary and Fabricated Metals	15.6	15.7	16.2	-0.1	-0.6	10.4	10.5	10.8	-0.1	-0.4					
Primary Metals	7.4	7.3	7.6	+0.1	-0.2										
Fabricated Metals	8.2	8.4	8.6	-0.2	-0.4										
Machinery	64.7	64.5	65.0	+0.2	-0.3	51.7	51.4	51.7	+0.3	+0.0					
Other Durable Goods	57.0	56.8	56.3	+0.2	+0.7	39.7	39.4	37.9	+0.3	+1.8					
Aircraft and Missiles	26.6	26.7	27.4	-0.1	-0.8										
Lumber and Wood Products (Except Furniture)	8.4	8.3	8.0	+0.1	+0.4										
All Other Durable Goods	22.0	21.8	20.9	+0.2	+1.1										
Nondurable Goods	41.2	42.0	40.9	-0.8	+0.3	28.6	29.1	27.7	-0.5	+0.9	5.3	5.5	5.3	-0.2	+0.0
Food and Kindred Products	9.4	9.4	9.5	+0.0	-0.1	6.2	6.2	6.2	+0.0	+0.0					
Apparel	4.3	4.4	4.7	-0.1	-0.4	3.1	3.1	3.0	+0.0	+0.1					
Printing and Publishing	16.1	16.2	15.4	-0.1	+0.7	11.3	11.3	10.8	+0.0	+0.5					
All Other Nondurable Goods	11.4	12.0	11.3	-0.6	+0.1	8.0	8.5	7.7	-0.5	+0.3					
Mining and Quarrying	11.2	11.2	10.9	+0.0	+0.3	0.6	0.6	0.6	+0.0	+0.0	1.7	1.7	1.6	+0.0	+0.1
Copper Mining	8.5	8.5	8.2	+0.0	+0.3										
Other Mining and Quarrying	2.7	2.7	2.7	+0.0	+0.0										
Construction	101.4	102.7	113.4	-1.3	-12.0	68.1	68.8	77.7	-0.7	-9.6	20.3	20.6	22.2	-0.3	-1.9
Trans., Communications, and Public Utilities	71.4	70.6	68.1	+0.8	+3.3	48.5	48.0	45.5	+0.5	+3.0	9.9	9.8	9.8	+0.1	+0.1
Transportation	32.6	32.0	31.4	+0.6	+1.2	22.5	22.1	21.2	+0.4	+1.3	4.8	4.7	4.9	+0.1	-0.1
Communications and Public Utilities	38.8	38.6	36.7	+0.2	+2.1	26.0	25.9	24.3	+0.1	+1.7	5.1	5.1	4.9	+0.0	+0.2
Trade	334.1	331.8	327.5	+2.3	+6.6	228.2	226.4	223.3	+1.8	+4.9	54.8	54.6	54.4	+0.2	+0.4
Wholesale Trade	64.1	63.9	63.5	+0.2	+0.6	51.2	51.2	51.0	+0.0	+0.2	7.7	7.5	7.4	+0.2	+0.3
Retail Trade	270.0	267.9	264.0	+2.1	+6.0	177.0	175.2	172.3	+1.8	+4.7	47.1	47.1	47.0	+0.0	+0.1
General Merchandise and Apparel	44.1	43.2	42.4	+0.9	+1.7	29.3	28.5	27.4	+0.8	+1.9	7.1	7.2	7.4	-0.1	-0.3
Food Stores	43.8	42.8	41.3	+1.0	+2.5	28.6	27.9	27.0	+0.7	+1.6	7.1	7.0	6.9	+0.1	+0.2
Automotive and Service Stations	32.0	32.1	31.8	-0.1	+0.2	20.1	20.2	20.3	-0.1	-0.2	5.5	5.4	5.4	+0.1	+0.1
Eating and Drinking Places	94.4	94.3	93.3	+0.1	+1.1	60.4	60.1	59.5	+0.3	+0.9	17.7	17.8	17.7	-0.1	+0.0
Other Retail Trade	55.7	55.5	55.2	+0.2	+0.5	38.6	38.5	38.1	+0.1	+0.5	9.7	9.7	9.6	+0.0	+0.1
Finance, Insurance, and Real Estate	91.5	91.3	90.5	+0.2	+1.0	72.2	71.9	71.5	+0.3	+0.7	12.6	12.8	12.5	-0.2	+0.1
Services and Miscellaneous	342.7	338.7	330.7	+4.0	+12.0	231.6	228.6	221.9	+3.0	+9.7	63.8	62.4	61.7	+1.4	+2.1
Hotels and Other Lodging Places	35.3	34.0	32.3	+1.3	+3.0	19.9	18.8	17.8	+1.1	+2.1	6.3	5.9	5.8	+0.4	+0.5
Business Services	75.5	74.9	73.6	+0.6	+1.9	60.7	60.3	58.9	+0.4	+1.8	11.1	10.9	11.1	+0.2	+0.0
Health Services	84.9	84.6	81.7	+0.3	+3.2	55.7	55.5	53.3	+0.2	+2.4	18.1	17.9	17.4	+0.2	+0.7
Other Services	147.0	145.2	143.1	+1.8	+3.9	95.3	94.0	91.9	+1.3	+3.4	28.3	27.7	27.4	+0.6	+0.9
Government	246.3	237.6	236.7	+8.7	+9.6	129.5	123.6	122.2	+5.9	+7.3	51.0	49.5	49.4	+1.5	+1.6
Federal	42.6	43.0	41.8	-0.4	+0.8										
State and Local	203.7	194.6	194.9	+9.1	+8.8										
School	120.7	112.3	115.2	+8.4	+5.5										

* Preliminary

** Labor force, unemployment, and employment are reported by place of residence.

*** Normal seasonal variations have been eliminated to reflect underlying economic trends.

NOTE Prepared in cooperation with the U.S. Department of Labor, Bureau of Labor Statistics.

-- Prepared by Arizona Department of Economic Security,Research Administration (CPS, 1/87)

Nonmetropolitan Counties
Labor Force and Employment
October 1987

	Apache	Cochise	Coconino	Gila	Graham	Greenlee	La Paz
TOTAL CIVILIAN LABOR FORCE*.	15,325	36,850	42,425	13,000	8,525	3,200	4,700
Total Unemployment	1,825	2,950	2,975	1,450	800	325	325
Rate	11.9%	8.0%	7.0%	11.2%	9.4%	10.2%	6.9%
Rate (Seas. Adj.)**. . . .	12.5%	8.3%	7.6%	11.2%	9.7%	10.5%	-INA-
Total Employment	13,500	33,900	39,450	11,550	7,725	2,875	4,375

THE ABOVE LABOR FORCE STATISTICS SHOULD NOT BE USED FOR ECONOMIC ASSISTANCE PROGRAMS

	Apache	Cochise	Coconino	Gila	Graham	Greenlee	La Paz
TOTAL WAGE AND SALARY. . . .	15,575	24,575	37,450	10,425	5,000	2,875	2,975
Manufacturing.	875	1,500	2,775	1,475	200	75	100
Mining and Quarrying	25	100	75	1,275	0	1,575	0
Construction	1,325	1,175	1,950	275	200	175	175
Trans., Comm., & Pub. Util..	2,000	1,450	2,450	425	175	25	100
Trade.	1,425	5,500	8,400	2,175	1,300	225	1,025
Fin., Insur., & Real Estate.	300	650	850	275	125	25	100
Services and Miscellaneous .	4,575	4,025	9,375	1,925	850	150	675
Government	5,050	10,175	11,575	2,600	2,150	625	800

	Mohave	Navajo	Pinal	Santa Cruz	Yavapai	Yuma
TOTAL CIVILIAN LABOR FORCE*.	30,550	26,850	38,150	9,925	37,025	39,200
Total Unemployment	2,075	2,600	3,400	1,575	1,900	6,250
Rate	6.8%	9.7%	8.9%	15.9%	5.1%	15.9%
Rate (Seas. Adj.)**. . . .	6.9%	10.4%	9.0%	13.6%	5.5%	-INA-
Total Employment	28,475	24,250	34,750	8,350	35,125	32,950

THE ABOVE LABOR FORCE STATISTICS SHOULD NOT BE USED FOR ECONOMIC ASSISTANCE PROGRAMS

	Mohave	Navajo	Pinal	Santa Cruz	Yavapai	Yuma
TOTAL WAGE AND SALARY. . . .	20,400	20,075	29,150	8,250	23,800	26,025
Manufacturing.	2,650	1,925	3,675	1,275	2,475	1,775
Mining and Quarrying	425	1,125	3,625	0	600	50
Construction	1,400	1,050	1,175	325	2,075	1,675
Trans., Comm., & Pub. Util..	1,150	1,750	1,150	500	875	925
Trade.	5,875	3,800	4,850	3,025	6,325	7,275
Fin., Insur., & Real Estate.	900	375	775	300	950	1,025
Services and Miscellaneous .	4,300	4,875	4,075	1,250	5,100	6,075
Government	3,700	5,175	9,825	1,575	5,400	7,225

*Adjusted to the Current Population Survey (CPS) to reflect place of residence.
**Seasonal adjustment not applicable for economic assistance programs.

NOTE--Series for Yuma and La Paz counties start January 1983. Data are not comparable to any past series.

Prepared in conjunction with the U.S. Department of Labor, Bureau of Labor Statistics.

Arizona Labor Force and Employment for Economic Assistance Programs
October 1987

County	Civilian Labor Force	Employment	Unemployment	Rate
Statewide	1,658,388	1,567,228	91,160	5.5%
Apache	15,335	13,512	1,823	11.9
Cochise	36,839	33,892	2,947	8.0
Coconino	42,448	39,462	2,986	7.0
Gila	12,993	11,539	1,454	11.2
Graham	8,538	7,730	808	9.5
Greenlee	3,216	2,880	336	10.4
La Paz	4,703	4,372	331	7.0
Maricopa	1,034,716	986,545	48,171	4.7
Mohave	30,541	28,466	2,075	6.8
Navajo	26,848	24,243	2,605	9.7
Pima	317,926	303,422	14,504	4.6
Pinal	38,140	34,752	3,388	8.9
Santa Cruz	9,907	8,342	1,565	15.8
Yavapai	37,037	35,132	1,905	5.1
Yuma	39,201	32,939	6,262	16.0

These figures are the only official BLS labor statistics to be used for revenue sharing purposes. They are not designed to be used as economic indicators. Note: Series for Yuma and La Paz counties start January 1983. Data are not comparable to any past series.

Arizona Unemployment Insurance Activities
September 1987

	September 1987	August 1987	September 1986	% Change From One Year Ago
Claimants Served*	29,105	33,970	32,515	-10.5%
Average Weeks Unemployed**	9.4	9.5	9.6	-1.5%
Benefits Paid*	$ 11,282,032	$ 12,354,841	$ 11,400,977	-1.0%
Trust Fund Balance	$412,604,195	$422,578,042	$381,843,786	8.1%

*All Programs **UI Only

Estimated Hours and Earnings of Production Workers in Selected Industries
Arizona

INDUSTRY	AVERAGE WEEKLY EARNINGS			AVERAGE WEEKLY HOURS			AVERAGE HOURLY EARNINGS		
	OCT.* 1987	SEP. 1987	OCT. 1986	OCT.* 1987	SEP. 1987	OCT. 1986	OCT.* 1987	SEP. 1987	OCT. 1986
FOR THE STATE OF ARIZONA									
Manufacturing	408.03	402.40	411.18	40.6	40.2	41.2	10.05	10.01	9.98
Aircraft & Missiles	552.94	529.94	INA	43.3	42.6	INA	12.77	12.44	INA
Food & Kindred Products . .	382.05	403.52	408.20	41.8	42.7	42.3	9.14	9.45	9.65
Primary Metals	509.76	472.55	484.90	37.9	36.1	39.2	13.45	13.09	12.37
Machinery	396.58	388.83	377.06	39.5	39.0	39.9	10.04	9.97	9.45
Copper Mining	510.82	503.66	495.16	41.7	40.1	39.9	12.25	12.56	12.41
Construction	423.26	408.42	437.18	36.3	35.3	36.8	11.66	11.57	11.88
Utilities	594.64	577.60	605.87	41.7	40.0	43.0	14.26	14.44	14.09
Retail Trade**	245.16	256.46	236.16	32.3	33.7	32.0	7.59	7.61	7.38
Wholesale Trade	392.34	386.31	383.66	39.0	39.1	40.3	10.06	9.88	9.52

Estimated Hours and Earnings of Production Workers in Selected Industries
Maricopa County

INDUSTRY	AVERAGE WEEKLY EARNINGS			AVERAGE WEEKLY HOURS			AVERAGE HOURLY EARNINGS		
	OCT.* 1987	SEP. 1987	AUG. 1987	OCT.* 1987	SEP. 1987	AUG. 1987	OCT.* 1987	SEP. 1987	AUG. 1987
FOR MARICOPA COUNTY									
Manufacturing	466.01	435.48	438.48	41.8	41.2	41.8	10.67	10.57	10.49
Construction	430.62	418.99	427.21	35.5	34.8	35.9	12.13	12.04	11.90
Retail Trade**	265.65	278.80	274.12	33.0	34.0	33.8	8.05	8.20	8.11
Wholesale Trade	396.81	388.32	393.90	38.6	38.6	39.0	10.28	10.06	10.10

Estimated Hours and Earnings of Production Workers in Selected Industries
Pima County

INDUSTRY	AVERAGE WEEKLY EARNINGS			AVERAGE WEEKLY HOURS			AVERAGE HOURLY EARNINGS		
	OCT.* 1987	SEP. 1987	AUG. 1987	OCT.* 1987	SEP. 1987	AUG. 1987	OCT.* 1987	SEP. 1987	AUG. 1987
*****FOR PIMA COUNTY*****									
Manufacturing	364.02	360.04	356.66	39.1	37.7	38.6	9.31	9.55	9.24
Copper Mining	519.57	526.26	511.24	41.8	41.8	41.7	12.43	12.59	12.26
Construction	383.82	359.62	367.37	37.3	35.5	36.7	10.29	10.13	10.01
Utilities	561.46	554.60	579.83	41.9	40.9	42.2	13.40	13.56	13.74

* Preliminary

** Excludes eating and drinking places.

NOTE--These estimates are based on a sample of full and part-time production and related employees whose payroll and hours are reported for the pay period which includes the 12th of the month. Prepared in cooperation with the U.S. Department of Labor, Bureau of Labor Statistics.

--Arizona Department of Economic Security, Research Administration. (1972 SIC, 1/87)

Change in Publication Policy

Budget constraints have forced us to modify our policy in regard to distributing free copies of our Labor Market Information publications. Effective December 1, 1987, we will allow only one complimentary copy of any publication to be given to a user. Multiple copies will have to be purchased from the Research Administration at nominal charge to help cover the cost of printing. A revised price list and order form will be available from this office after December 1. Organizations finding that these prices create a financial hardship may contact the manager of the Economic Analysis Unit. Quantities for sale are subject to availability of copies on hand. With the exception of the OIS Users' Manual, there will continue to be no charge for any OIS or ASOICC publication. To receive a price list and order form, please write to the address on the back of this newsletter or call (602) 255-3871.

Arizona's Top Private Companies

Who are the largest private companies in Arizona? Lists of the largest private firms in the state have been compiled by 1) Arthur Andersen & Co. and 2) Arizona Trend.

The Arizona 100, compiled annually by Arthur Andersen & Co., is a list of privately held firms that were willing to release financial data and have headquarters in the state. Table 1 contains the first 15 firms on the list, based on revenues for the 1986 fiscal year.

The construction industry dominates the list, with the top three companies in terms of employment and four of the top ten in terms of revenues. The industry has 33 percent of all employees represented by the 100 firms. In addition, 14 of the 26 new companies added to the list this year are in construction. Even with the recent

TABLE 1

THE FIRST 15 OF ARIZONA'S
TOP 100 PRIVATE FIRMS
(Ranked by Revenue)

Rank	Company	Location	Industry
1	Shamrock Foods Co.	Phoenix	Wholesale Trade
2	Sundt Corp.	Tucson	Construction
3	Bar-S Foods Co.	Phoenix	Manufacturing
4	Tanner Southwest	Phoenix	Construction
5	Kaibab Industries	Phoenix	Manufacturing
6	Gosnell Builders	Phoenix	Construction
7	O'Malley Lumber	Phoenix	Wholesale Trade
8	Microage Inc.	Tempe	Wholesale Trade
9	Kitchell Corp.	Phoenix	Construction
10	Sun Land Beef Co.	Tolleson	Manufacturing
11	Empire Southwest Co.	Mesa	Wholesale Trade
12	Forever Living Products	Tempe	Other
13	Coventry Financial Inc.	Phoenix	Construction
14	Continental Homes	Scottsdale	Construction
15	Hensley & Co.	Glendale	Wholesale Trade

SOURCE: Arthur Andersen & Co.

TABLE 2

THE FIRST 15 OF ARIZONA'S TOP 150 PRIVATE FIRMS

(Ranked by Revenue)

Rank	Company	Location	Principal Business
1	Bashas'	Chandler	Groceries; general merchandise; store building; equipment rental
2	Sundt Corp.	Tucson	Construction
3	Shamrock Foods Co.	Phoenix	Food distribution
4	Giant Industries Inc.	Phoenix	Oil refining; service stations
5	Tanner Southwest Inc.	Phoenix	Construction; real estate development
6	Reinalt-Thomas Corp.	Scottsdale	Retail tire sales
7	Lou Grubb Chevrolet Inc.	Phoenix	Car dealership
8	Bar-S Foods Co.	Phoenix	Meat and poultry processing
9	Gosnell Builders	Phoenix	Construction
10	O'Malley Lumber Co.	Phoenix	Retail and wholesale lumber, hardware, building materials
11	United Dairymen of Arizona	Tempe	Milk processing
12	Microage Inc.	Tempe	Microcomputer franchising
13	Kitchell Corp.	Phoenix	Construction
14	Empire Southwest Co.	Mesa	Heavy machinery and equipment sales and leasing
15	Sun Land Beef Co.	Tolleson	Beef slaughtering and processing

SOURCE: Arizona Trend

downturn in construction employment in Arizona, the industry continues to be an important part of the state's economy.

Total employment of these 100 companies was 40,626 in 1986, an increase from 39,598 in the previous year. Nonetheless, revenues declined from $6.33 billion to $6.25 billion. Productivity, defined as revenues per employee, also dropped from $159,857 to $153,990.

The home base of 59 firms on the Arizona 100 list is Phoenix, while 12 are located in Tucson, seven in Scottsdale, five each in Glendale and Mesa, four in Tempe, two in Chandler, and one each in Casa Grande, Gilbert, Morristown, Rillito, Sun Lakes, and Tolleson.

The other list of top companies was prepared by Arizona Trend. The magazine's first list of the top 150 private companies in Arizona was compiled from research on more than 350 Arizona-based private firms. The first 15 of these 150 top firms are listed in Table 2.

The magazine also found construction firms to have a major impact on the state, with four of the top 13 companies in that industry. Other prosperous sectors of the economy include food wholesalers, retail grocery stores, and auto dealers. Interestingly, only two computer-related firms are in the top 40.

Barbara Keene

SOURCES:

Bob Christman, "Arizona's Top Firms Ranked," Arizona Daily Star, October 8, 1987.

Shawn Dahl, "Arizona's Top 150 Private Companies, Arizona Trend, September 1987.

Francie Noyes, "Arizona's Builders Rule Business Roost," The Arizona Republic, October 8, 1987.

New Developments

"New Developments" is featured eacn month as a service to employers and job seekers. It is a compilation of public announcements of the more significant new construction, grand openings, major hirings and layoffs, and other employer events that have special significance for Arizona labor markets. The announcements are paraphrased and otherwise edited from articles published in newspapers and other periodicals from throughout the state. "New Developments" is limited to space available, and no attempt is made to compile an exhaustive list of all such events that have occurred during the month.

ARIZONA BUSINESSES - Business Week has ranked the best small companies in the country based on three-year sales growth, earnings growth, and return on invested capital. All of the firms have annual sales less than $150 million, a current market value greater than $1 million, and a current stock price greater than $1. Banks, insurers, real estate firms, and utilities are excluded.

One Arizona firm, Inertia Dynamics, was ranked 43 out of the 10C companies on the list. The Chandler business makes gas-powered weed trimmers.

GAMING - Construction has begun on a $65 million, 468-room hotel-casino in Laughlin, Nevada. The Mexican-theme casino is being built by Harrah's on a rugged, out-of-the-way piece of desert.

RETAIL TRADE - About 250 people in Arizona will be out of work as a result of Babbitt Brothers Trading Co. selling its department store division. The division, which would have entered its 98th year in business, has been losing money for several years. Eight stores statewide will close--two in Flagstaff and one each in Kingman, Yuma, Winslow, Page, Prescott, and Cottonwood.

A.J. Bayless Markets Inc. has closed six Phoenix stores because of changing market conditions. The supermarkets were located at 16th Street and Camelback, 27th Avenue and Northern, Seventh Street and Coral Gables, Seventh Avenue and Bethany Home, Seventh Street and Glendale, and Third Street and Dunlap.

On the other hand, the company has opened two more of its A.J.'s Fine Food stores in the Valley. Both of the "upscale" stores offer a variety of domestic and imported specialty items and regular groceries. One store, located at the Mercado in Scottsdale, offers a fruit and juice bar, specialty accessories, a spirits department, and a deli. The other new store, in Uptown Plaza in Phoenix, has a catering service, floral service, and an offering of cold entrees with seating for lunch-time customers.

AIRCRAFT MAINTENANCE - Dalfort Corp. of Dallas has begun providing heavy maintenance for narrow-body transport carriers at the Phoenix-Goodyear Municipal Airport. Up to 500 people could be employed in five years. Most of the work will be on Boeing 727 and 737 and DC-8 and DC-9 aircraft.

CONSTRUCTION - Ground has been broken for the new Police Administration Building and Satellite Fire Facility in Scottsdale. The $3.5 million project will consist of a 49,000-square-foot police building and a 3,700-square-foot fire facility on the southwest corner of 91st Street and Via Linda.

Construction is under way on a $3.5 million headquarters for Quadri Corp. in Chandler. The 61,000-square-foot office and industrial-development complex will be located at 320 North McKemy Avenue in the Southpark Business Center. The defense-related electronics manufacturer will consolidate five Tempe offices and manufacturing facilities at the new headquarters when it is completed in the first quarter of 1988.

A $2.88 million contract has been awarded by the City of Phoenix for a construction project at Sky Harbor International Airport. The project will consist of new storage area, the extension of Parking Lot C to the west, the relocation of two metal buildings, and the replacement of some cement pavement.

Flower Court, a $4.5 million office building, is under construction at the northeast corner of 44th Street and Flower in Phoenix. The 26,000-square-foot structure is scheduled for completion in 1988 and will feature a passive solar energy design.

About 160 homes ranging in price from $70,000 to $100,000 will be built by Cardon Homes Corp. at 73rd Avenue and Cholla in Peoria. The single-family subdivision will be known as Mill Run.

Construction is under way on The Forum, a $30 million office building at 6263 North Scottsdale Road in Scottsdale. The three-story, 200,000-square-foot structure will feature office, retail, banking, and restaurant space.

Enserch of Alaska has received a $32.5 million contract to construct the foundation, outlet, and diversion works for the New Waddell Dam, about 35 miles northwest of Phoenix. The work will take about two years to complete.

TOURISM - A visitor profile survey has been conducted by CIC Research Inc. of San Diego for the Phoenix and Valley of the Sun Convention and Visitors Bureau. The survey, conducted between September 1986 and May 1987, covered visitors staying in hotels, motels, or resorts. Findings include the average age of Valley visitors (46.4), the average annual income ($59,000), and the top dislike (traffic). Sixty-two percent visit to attend group meetings or for business and spend an average of $98 per day. Eighty percent plan to return to the Valley.

MANUFACTURING - A record amount of softwood lumber was produced by Arizona sawmills in 1986. According to the Western Wood Products Association, the Arizona output of 409 million board feet had a wholesale value of $147 million. This was an increase from 361 million board feet valued at $125 million in the previous year.

Boeing Co. has awarded a five-year contract worth up to $30 million to Aircraft Gear Corp. of Chandler. With an additional 45 workers by next spring, Aircraft Gear will manufacture slat-actuation devices for the Boeing 767 wide-body twinjet.

Gates Learjet Corp. has received a $16.2 million contract from the Aeronautical Systems Division at Wright-Patterson Air Force Base for four C-21A aircraft. Scheduled for delivery this year, the aircraft will be used by the Air National Guard at Andrews Air Force Base in Maryland.

Simmons USA has opened an assembly plant in the Papago Distribution Center at 43rd Avenue and Van Buren Street in west Pheonix. The bedding manufacturer is expected to eventually employ as many as 55 people.

The Federal Bureau of Investigation has awarded a $133 million contract to Information Technologies Inc. of Scottsdale to connect about 700 separate local area networks to IBM mainframes. More than 8,000 work stations will be involved.

Sunchip Snacks Foods Co. will soon begin making potato chips in the former Cashiers Structural Foam building in Chandler. About 70 workers will be employed.

The Aeronautical Systems Division of the U.S. Air Force has awarded a $2 million contract to Durodyne Inc. of Tucson to develop decoys for F-15 and F-16 fighter aircraft. The decoys will be used in an Air Force camouflage, concealment, and deception program to protect air bases and aircraft.

FINANCE - The CIT Group/Equipment Financing Inc. has established its western regional headquarters at Fountainhead Corporate Park in Tempe. Employing about 60 people, the new headquarters will provide support services to branch offices in Arizona, California, Idaho, New Mexico, Texas, Utah, and Wyoming.

BUSINESS ASSISTANCE - The Mesa Chamber of Commerce, along with the Service Corps of Retired Executives and the Small Business Administration, has established a Small Business Assistance Center. Programs will include seminars and counseling.

RECREATION - Construction has begun on a 35,000-square-foot multipurpose community center at Paradise Valley Park, 40th Street and Union Hills Drive. The $2.3 million center will be designed around a central courtyard and feature a community hall, a gymnasium, showers, exercise and craft rooms, classrooms, a kitchen, and a lounge. Completion is scheduled for late 1988 or early 1989.

TELEVISION - The Valley is being used as the production base for the upcoming ABC mystery/comedy series, Asimov's Probe. Production began October 14 and will continue through December 22, 1987. Each of the six episodes will cost $850,000, with half of the total budget being spent in the Valley. Two-thirds of the production crew and all supporting cast members have been hired locally. The program, starring Parker Stevenson and Ashley Crow, will probably begin airing in January 1988.

COMMUNICATIONS - Phoenix has been chosen by U.S. West Inc. as the headquarters site for a new division, Home and Personal Services. The new division will develop and market telephone products and services for residential customers in a 14-state area. Initially, 150 management and technical people will be employed, but an additional 200 to 300 research and product-development employees will be added during the next five years.

TRANSPORTATION - Amtrak has opened a triweekly Tempe stop for its Sunset Limited rail service between New Orleans and Los Angeles. The town had not had passenger rail service for 19 years. Located near Third Street and Ash Avenue, the train station is being renovated, and a restaurant is being added. Tickets from Tempe to Los Angeles cost $75 one way and $105 round trip.

A new $2 million control tower is being constructed at Scottsdale Municipal Airport, located north of Thunderbird Road and east of Scottsdale Road. The 98-foot tower, designed to last 98 years, will improve controllers' depth perception and lessen visual background interference from the McDowell Mountains. The Federal Aviation Administration is paying for the construction which will be completed in mid-1988.

HOTELS - Continental Inns Inc., based in California, soon will begin construction of an $8.5 million, 163-room Howard Johnson hotel in Phoenix. The new hotel will be located near Sky Harbor International Airport.

EDUCATION - The University of Arizona in Tucson has received more than $6 million in donations toward a new building for the College of Business and Public Administration. Construction of the $19 million, 180,000-square-foot McClelland Hall will be completed in mid-1990.

JOB GROWTH - NPA Data Services Inc. has reported that Maricopa County will be fifth and Pima County 37th among all counties in the nation in the amount of job growth between now and the year 2000. Los Angeles County will lead the nation with 805,000 jobs, followed by Orange County, California with 621,000; Harris County, Texas with 560,000; and Dallas County, Texas with 428,000. Maricopa will have 403,000 new jobs and Pima 113,000.

Phoenix ranks fifth among U.S. metropolitan areas in growth of high tech employment during the past seven years, according to a Grubb & Ellis report. High tech employment growth in Phoenix outpaced total employment growth by an average 2.4 percent annually compared with a 2.3 rate for the country.

DEVELOPMENT - The Glendale City Council has approved a proposal to redevelop 4.2 acres in the downtown area into offices and retail and service businesses. The Super Block project site involves one and a half blocks bounded by Glendale Avenue on the south, Glenn Drive on the north, 57th Avenue on the east, and an alley between 57th Drive and 58th Avenue on the west. The proposal includes two buildings of at least four stories and 65,000 square feet constructed in two phases. The site now is occupied by two banks, school district offices, stores, parking space, and vacant offices.

Arizona Labor Market Newsletter
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2/16/88 50465-1

ARIZONA LABOR MARKET INFORMATION NEWSLETTER

Vol. XII No. 1
January 1988

Unemployment Rate

Seasonally Adjusted
November*

ARIZONA	5.7%
Maricopa Co.	4.8%
Pima Co.	4.7%
UNITED STATES	5.9%

Consumer Price Index

National-October 1987
1967 - Base Year

Wage Earner/Clerical
Worker - 340.0
% Chg. Yr. Ago 4.6

All Urban - 345.3
% Chg. Yr. Ago 4.5

Phoenix-3rd Qtr. 1987
1977 - Base Year

All Urban - 201.7
% Chg. Yr. Ago 4.1

Tucson-3rd Qtr. 1987
1st Qtr. 1983 - Base Qtr.

All Urban - 120.6
% Chg. Yr. Ago 3.7

* Preliminary

How Unemployment Is Measured

Robert Burton, an English clergyman, wrote in 1621, "Employment is so essential to human happiness that indolence is justly considered the mother of misery." Today, the single most important statistic used to measure labor market conditions is the unemployment rate. It is often used to assess the hardship experienced by workers who are willing to work and are available for work, but who are unable to find jobs. That is, the higher the overall unemployment rate, the harder it is for each individual who wants a job to find work. For example, college students find it easier to find after-school and summer jobs when the unemployment rate is low than when it is high. The following section will discuss how the government measures the unemployment rate.

Unemployment in Arizona is usually shown as a percent of the labor force, with that percent being called the unemployment rate. Finding the unemployment rate requires two absolute numbers: the number of those in the labor force and the number of unemployed. The rate is found by dividing the number unemployed by the number in the labor force.

To gather labor force data, the U.S. Bureau of Labor Statistics (BLS) makes a monthly survey of some 60,000 households. The assembling and processing cost of this survey is estimated at $1.5 million per month.

DES Arizona Department of Economic Security
— Moving People Toward Self-Sufficiency

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Barbara Keene, Editor
Linda Van Calcar, Word Processor

The households that are included in the survey represent a stratified sample in proportion to the population distribution in a decennial (ten-year) population census conducted by the Bureau of the Census.

The formula used by BLS to identify the labor force starts with all residents within the United States and makes the following subtractions: (1) all residents under the age of 16, (2) all residents who are institutionalized (e.g., in prison), and (3) all residents who are not employed and not looking for work. For example, a college student who had not looked for work within the last four weeks would not be in the labor force, but one who had looked for work within the last four weeks could be. A housewife not interested in working outside the home would not be in the labor force. Also, four weeks after an unemployed worker gives up looking for work, he or she is dropped from the labor force.

The employed include four groups: (1) those working full time for pay; (2) those working part time for pay; (3) those working at least 15 hours per week, without pay, in a family business; and (4) those who have a job but are not working because they are on vacation, ill, involved in a labor dispute, prevented from working by bad weather, or off for personal reasons. A person who works two jobs is only counted once as employed.

To be unemployed, a person must meet four requirements: (1) be in the labor force; (2) be jobless; (3) have looked for work in the last four weeks or, if not looking, be on a union or professional register for work, be waiting for recall from a layoff, or be starting a job within 30 days; and (4) be available for work.

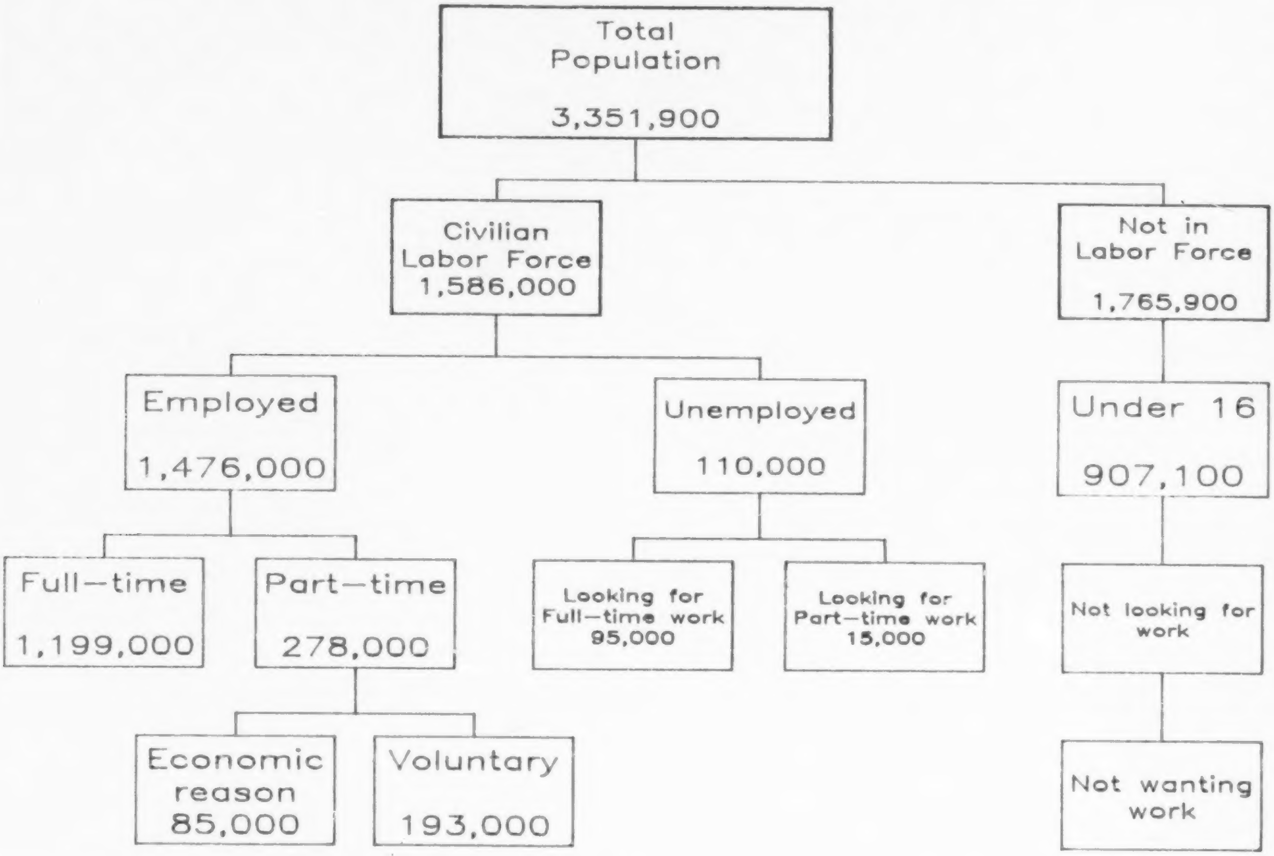
The 60,000-family sample, out of 84 million families, may seem small, but statisticians consider it more than adequate for an estimate of national employment and unemployment. It is less than adequate for most state or substate geographic breakdowns, however. The sample is taken in only 629 geographic areas, including less than one-third of the counties and cities in the United States. As a result of that geographical distribution, the sample is considered to be statistically reliable for only the ten largest states. The survey data for the other 40 states must be supplemented by unemployment insurance claim information for reliable state unemployment estimates.

An Arizona labor force schematic for 1986 is shown on the opposite page. In that year, 1,586,000 (47.3 percent) people were in the civilian labor force, out of a total population of 3,351,900. The remaining 1,765,900 (52.7 percent) were not in the labor force. Out of this number, 51.4 percent were under the age of 16 and the remaining 48.6 percent were either not looking for work or not wanting work for other reasons.

Of the total labor force of 1,586,000, 93.1 percent were employed and 6.9 percent were unemployed. More than 81 percent of the employed people were working full time and about 19 percent were working part time. The reason for the part-time work was either economic or voluntary.

Therefore, in 1986, the size of the labor force was less than half the size of the population. However, the percentage of the total population participating in the labor force has been consistently increasing for more than a decade. (Refer to table on page 3.) The higher participation rates are largely a result of a higher proportion of working women. The population increase,

1986 LABOR FORCE SCHEMATIC


Total Population
3,351,900
Civilian Labor Force
1,586,000
Not in Labor Force
1,765,900
Employed
1,476,000
Unemployed
110,000
Under 16
907,100
Full-time
1,199,000
Part-time
278,000
Looking for Full-time work
95,000
Looking for Part-time work
15,000
Not looking for work
Economic reason
85,000
Voluntary
193,000
Not wanting work

NOTE: Totals may not add due to rounding.

ARIZONA LABOR FORCE PARTICIPATION RATES IN SELECTED YEARS (In Thousands)

Year	Civilian Noninstitutional Population, 16 and over	Labor Force	Participation Rate
1986	2,450.0	1,586.0	64.7
1985	2,354.0	1,477.0	62.7
1984	2,255.0	1,441.0	63.9
1983	2,173.0	1,387.0	63.8
1982	2,096.0	1,338.0	63.8
1980	2,026.0	1,240.0	61.2
1978	1,669.0	1,077.0	64.5
1976	1,583.0	988.0	62.4

SOURCE: U.S. Department of Labor, Bureau of Labor Statistics.

mostly due to inmigration from midwestern states, has also influenced the participation rate in recent years.

Many people believe, however, that the unemployment rate does not measure hardship precisely enough because of the following reasons: (1) it does not distinguish between full- and part-time work, (2) it does not give any consideration to the worker who is employed but has skills for a higher-level job, and (3) it does not include the discouraged workers in the labor force. Others argue that the biggest drawback to the use of the unemployment rate as an indicator of hardship is the increase in unemployment insurance benefits. Because high levels of unemployment compensation enable longer periods of search for a job, some of the measured unemployment may be voluntary.

The labor force statistics reported every month are a snapshot at a point in time. People, however, continuously move in and out of the labor force for various reasons. One of the major reasons for this fluctuation is the seasonal nature of employment. The following article will discuss Yuma County, where a significant amount of the labor force is engaged in seasonal employment.

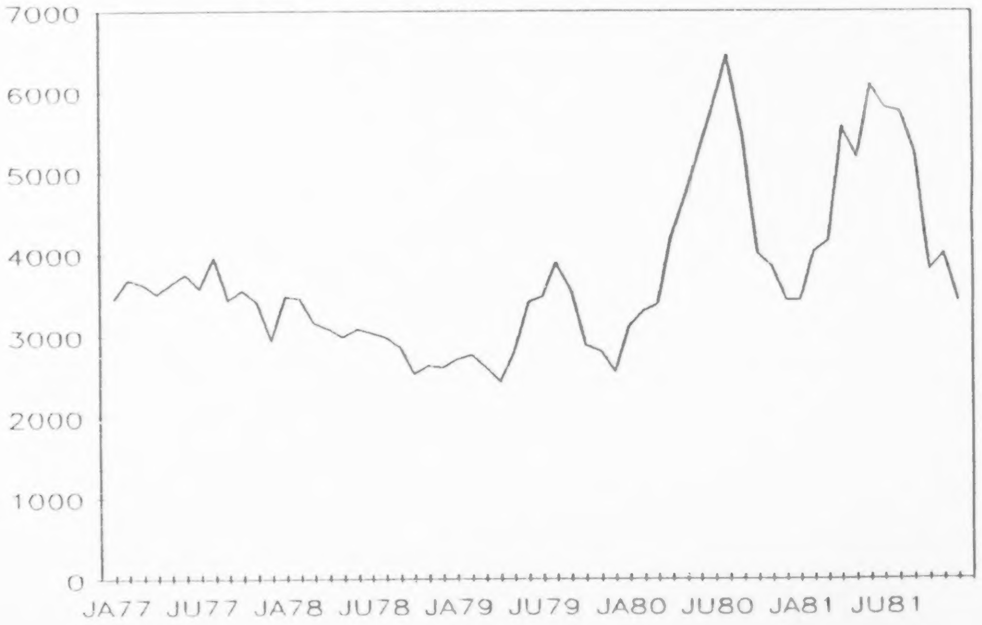
Jalal Ahmad

Unemployment in Yuma County: Why Is It So High?

Yuma County's labor force statistics are unique in at least two ways: (1) Yuma has strong seasonal employment, and (2) it has a common border with the state of California and the country of Mexico.

Due to its normal seasonal activities in agriculture, county unemployment tends to rise in summer and decline in winter months. Besides agriculture, tourism is another major industry that forces employ-

YUMA COUNTY UNEMPLOYMENT
JANUARY 1977 — DECEMBER 1981



ment, mostly in trade and services, to swing. Ironically for Yuma County, tourism activities reach low levels during the summer months as does agriculture. For example, in trade, employment has declined on average by more than 1,100 between March and August of each year since 1983.

To add to normal seasonal activities, government employment also goes down during the summer months when county schools and colleges have few federal work-study program participants. It is an unfortunate fact that the employment peaks and troughs of industries that are affected by the seasons coincide in Yuma County. Due to these normal seasonal patterns, the county finds its unemployment higher in the summer than in the winter.

Usually, we adjust county unemployment rates for seasonality so that the normal seasonal patterns do not affect the unemployment rates. Unfortunately, we have been unable, since 1983, to produce seasonally adjusted unemployment rates for Yuma County. In 1983, La Paz County was created out of part of Yuma County. Since five years of data are needed to calculate seasonal factors, we will finally have seasonal unemployment rates after 1987's data are in.

The rise and fall in unemployment statistics, due to seasonal factors, became more apparent as agricultural workers were covered by Unemployment Insurance (UI) beginning in 1978.

The common international and state borders affect employment and unemployment statistics in various ways. For example, those who work in Yuma and live outside of Yuma are not counted in its labor force because the employment number is adjusted for residence. Unemployment, on the other hand, is subject to problems in establishing residence. This is particularly true of the agricultural component that is migratory in nature. If residence addresses of UI claimants are not accurate, then a distortion occurs in the ensuing unemployment count. This problem, because of the industry dynamics, is a complex one that is not easily resolved.

Looking back to the recent past, two important laws have been passed which brought these changes: 1) coverage of agricultural workers with Unemployment Insurance and (2) waiver of residency requirement to qualify for UI benefits. Both of these laws have impacted labor force statistics in Yuma.

The data reveal that until agriculture was covered by UI there were hardly any seasonal changes in the number of unemployed. In other words, unemployment statistics were very stable. But with the coverage of agriculture by UI, unemployment figures started to show the ups and downs due to normal seasonal activities. (Refer to graph on page 4.)

The effects of these two laws are more apparent with UI insured claims data. UI claims and unemployment figures fluctuate very closely. During the summer, the total number of claimants and unemployment both go up. For example, in the border town of San Luis in July 1987, total claims went up to 1,876, with 840 claims being filed by aliens. While in September 1987, with the beginning of the agricultural season, that number fell to 942 with 368 filed by aliens. These claims figures seem to be very high compared to the city's small population of 2,735 in 1985. Similarities were also revealed in data for other border towns like Somerton.

Efforts are already being made by the UI administration to better measure nonresident aliens. Many problems will arise, however, in verifying the residency of UI claimants, such as the confidentiality rules that UI currently follows. To improve accuracy of these statistics, other measures are also under consideration. First, seasonally adjusted unemployment figures will be calculated in early 1988 (five years after the split of La Paz from Yuma) to mitigate the seasonal impact on these statistics. Second, to better measure employment and the number of displaced workers in the agricultural sector, further efforts will be made to develop a comprehensive list of agricultural employers. To accomplish that, discussions are under way with the Bureau of Labor Statistics (BLS) and the Arizona Department of Water Resources. Third, rural economic statistics, particularly employment by occupation and industry, would be very helpful in analyzing the local economy. A request for state funds has already been made to accomplish that goal. Fourth, gaining access to the Current Population Survey (CPS), improving its coverage and accuracy, and providing increased funding to add households to the CPS would definitely improve the overall accuracy of local area unemployment statistics.

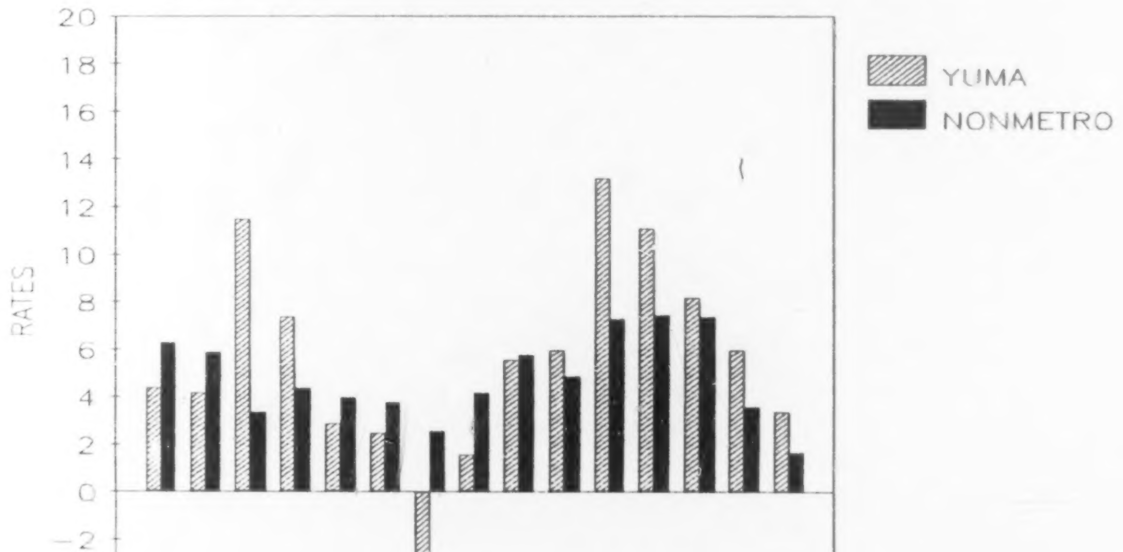
Should Yuma Be Concerned?

To evaluate the performance of Yuma's economy, growth in wage and salary employment would be a better indicator than unemployment. The Arizona Department of Economic Security (DES) Research Administration in cooperation with BLS collects wage and salary employment data by industry. The data in the graph below reveal that Yuma County has registered positive wage and salary employment growth since its split with La Paz except for one quarter. Also, the county has grown at a higher rate than the average of all of Arizona's nonmetropolitan counties together.

Looking into the future, it can be expected that tourism in the county will grow. Growing activity along Interstate 8 will contribute to an increasing level of employment opportunities in services and trade. Construction employment should also grow steadily in the future. Over $24 million will be spent constructing new facilities at the Marine Corps Air Station in late 1987 and 1988. Other major construction projects include Cibola High School, scheduled for completion by August 1988, and the $20 million renovation and expansion of the Yuma Regional Medical Center.

Manufacturing employment has declined over the last 12 months ending in October of 1987, but the trend is expected to change. Because Yuma is situated on the Mexican border, businesses have been investigating the Yuma area as a good prospect for twin manufacturing plants. Firms also find the area's climate, low wages, and proximity

YUMA VERSUS NONMETRO
WAGE AND SALARY EMPLOYMENT
GROWTH RATES, 1984:1 – 1987:3



to California markets attractive. In the future, manufacturing jobs should increase.

The outlook for Yuma County is favorable as it changes from an agricultural-based economy to a more industrialized economy. As the economy relies less heavily on seasonal agriculture, the unemployment statistics will also become more stable. In addition, upcoming seasonal adjustment will reduce the effects of multiindustry seasonal changes. Underlying real economic change or stability will then become more apparent.

Jalal Ahmad

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Annual Pay in Metropolitan Areas

The Phoenix metropolitan area ranked 75th among all U.S. metropolitan areas in the amount of annual pay received by employees in 1986. The Tucson area was ranked 169th.

Data released by the U.S. Bureau of Labor Statistics indicate that average annual pay in metropolitan areas increased 4.2 percent from 1985 to 1986. The average in 1986 for 299 metropolitan areas was $20,691, up from $19,851 in the previous year. (Refer to the November 1987 issue of this newsletter for data by state and industry.)

The metropolitan area of Anchorage, Alaska, led the nation with the highest average annual pay at $28,742; followed by Flint, Michigan, at $26,638; San Jose, California, at $26,365; and New York, New York, at $26,241. Santa Cruz, California, experienced the largest percentage growth in pay from 1985 to 1986 with an increase of 7.8 percent.

On the other hand, average annual pay declined in 17 areas with the largest decrease (4.9 percent) occurring in Kenosha, Wisconsin. The lowest pay in 1986 was found in Jacksonville, North Carolina, with $12,859.

Both of Arizona's metropolitan areas showed increases in average annual pay. The Phoenix area experienced an increase of 5.1 percent from $18,769 in 1985 to $19,730 in 1986, while the average annual pay of employees in the Tucson metropolitan area grew 3.5 percent from $17,351 to $17,951. (See table on page 8 for data from selected metropolitan areas.)

These data are compiled from reports submitted by employers covered by Unemployment Insurance (UI) laws for over 98 million workers nationwide. Included in the payroll data are bonuses, the cash value of meals and lodging when supplied, tips and other gratuities, and employer contributions to certain deferred compensation plans such as 401(k) plans.

Exclusions from UI coverage include most agricultural workers on small farms, members of the Armed Forces, elected officials in most states, most railroad employees, most domestic workers, most student workers at schools, employees of some small nonprofit organizations, self-employed individuals, and unpaid family members.

Certain factors should be taken into consideration when comparing average annual pay levels between metropolitan areas. Average annual pay is computed by dividing total annual payrolls of employers by the average monthly employment. The result is affected by the composition of employment in the area by occupation, industry, and hours of work.

The term "metropolitan areas" used in this article refers to Metropolitan Statistical Areas (MSAs), as defined by the U.S. Office of Management and Budget. The geographic boundaries of Arizona's two MSAs--Phoenix and Tucson--correspond to the Maricopa and Pima county boundaries.

Barbara Keene

AVERAGE ANNUAL PAY
IN SELECTED METROPOLITAN AREAS

Metropolitan Area	1985 Annual Pay	1986 Annual Pay	1985-1986 % Change
Birmingham, Alabama	$18,672	$19,164	2.6
Anchorage, Alaska	28,236	28,742	1.8
PHOENIX, ARIZONA	18,769	19,730	5.1
TUCSON, ARIZONA	17,351	17,951	3.5
Little Rock-North Little Rock, Arkansas	17,662	18,469	4.6
San Jose, California	25,050	26,365	5.2
Santa Cruz, California	15,826	17,055	7.8
Bridgeport-Stamford-Norwalk-Danbury, Connecticut	23,970	25,707	7.2
Miami-Hialeah, Florida	18,877	19,781	4.8
Atlanta, Georgia	20,264	21,246	4.8
Honolulu, Hawaii	17,902	18,724	4.6
Indianapolis, Indiana	19,494	20,115	3.2
Cedar Rapids, Iowa	18,620	19,145	2.8
Topeka, Kansas	17,929	18,641	4.0
Lexington-Fayette, Kentucky	17,269	17,780	3.0
Baton Rouge, Louisiana	18,587	18,531	-0.3
Bangor, Maine	15,902	16,712	5.1
Hagerstown, Maryland	17,784	17,966	1.0
Boston-Lawrence-Salem-Lowell-Brockton, Massachusetts	20,817	22,250	6.9
Flint, Michigan	26,575	26,638	0.2
Rochester, Minnesota	20,502	21,505	4.9
Biloxi-Gulfport, Mississippi	15,248	15,489	1.6
St. Joseph, Missouri	16,436	16,927	3.0
Billings, Montana	17,295	17,427	0.8
Lincoln, Nebraska	15,930	16,487	3.5
Las Vegas, Nevada	18,065	18,617	3.1
Atlantic City, New Jersey	17,827	18,870	5.9
Albuquerque, New Mexico	17,980	18,492	2.8
New York, New York	24,500	26,241	7.1
Jacksonville, North Carolina	12,482	12,859	3.0
Bismarck, North Dakota	16,513	16,879	2.2
Akron, Ohio	19,827	20,586	3.8
Oklahoma City, Oklahoma	19,089	19,144	0.3
Portland, Oregon	19,230	19,935	3.7
Pittsburgh, Pennsylvania	19,558	20,193	3.2
Charleston, South Carolina	16,004	16,560	3.5
Rapid City, South Dakota	14,607	15,225	4.2
Knoxville, Tennessee	16,721	17,401	4.1
Dallas, Texas	22,069	22,769	3.2
Provo-Orem, Utah	15,881	16,130	1.6
Richmond-Petersburg, Virginia	18,566	19,349	4.2
Seattle, Washington	20,907	21,928	4.9
Charleston, West Virginia	19,503	19,953	2.3
Kenosha, Wisconsin	19,637	18,669	-4.9
Casper, Wyoming	19,997	19,611	-1.9

SOURCE: News, U.S. Bureau of Labor Statistics, USDL 87-476, October 30, 1987.

The Arizona Labor Force in November

Arizona's economy continued to plod along in November, adding 7,500 new jobs. This was the slowest November job growth since the 1981-82 recession. A further indication of the slack economy was the edging up of the unemployment rate to 5.7 percent, the first increase since January. The service-producing industries maintained steady growth during the month, while construction and manufacturing were weak.

Construction continued its downward spiral, losing another 1,900 jobs in November. Since November 1986, construction employment has declined by 12,700, a contraction of 11.3 percent. Construction employment normally shows a seasonal drop this time of year as cold weather hinders building activity in the northern counties. This month, however, 1,700 of the construction jobs lost were in Maricopa County. The slowdown in building activity in the Phoenix metropolitan area is the consequence of extensive overbuilding in both the commercial and multifamily residential sectors in 1985 and 1986. No improvement is expected for this industry until the glut of office space and apartments on the market is absorbed. Even the most optimistic of forecasts do not see any growth in construction activity until late 1988.

As the dollar falls on the foreign exchange market, making U.S. goods more competitive, manufacturing is expected to rebound. It is apparent that Arizona's manufacturers have not felt the effects of the decline in the dollar as employment declined for the third consecutive month, down 100 from October. Despite these recent decreases, manufacturing employment is still slightly above its November 1986 level.

Employment gains in the trade sector indicate that retailers are expecting a good holiday season. Trade employment grew by 4,300 over the last month and 4,800 since November 1986. While surveys of consumer sentiment show that the October 19 stock market crash will have a negative impact on consumer spending, it is not expected to be substantial. The holiday shopping season in the southern counties could be sluggish due to the late-November peso devaluation.

Service industries also showed seasonal gains as businesses geared up for the influx of winter visitors. The 1,000 service jobs added in November, paired with the strong gains of the previous two months, point toward a healthy winter tourism season.

Government employment, which was up 3,700, accounted for nearly half of November's job growth. The two primary sources of this job growth were students in work-study programs at colleges and universities and temporary workers hired for the state fair in late October and early November.

With 11 months of employment statistics in, it appears that total wage and salary employment growth for 1987 will be in the 2-3 percent range, well below the 4.9 percent growth recorded in 1986. Job growth in 1987 has exhibited the same pattern as in 1986, with the service-producing industries easily outpacing the goods-producing industries. Future job growth will depend on the speed with which manufacturing and construction come out of the doldrums.

The short-term prospects for Arizona's economy will be shaped by consumer reaction to the stock market crash, the effects of the federal budget cuts, and the Federal Reserve's monetary policy. These factors will be critical in determining if the economy will continue to be flat or show some strength.

Rosemary Reardon

Arizona Labor Force and Employment

November 1987 (in thousands)

Arizona Labor Force and Employment

November 1987 (in thousands)

	ARIZONA					MARICOPA COUNTY					PIMA COUNTY				
				Amt Change					Amt Change					Amt Change	
	Nov.* 1987	Oct. 1987	Nov. 1986	Oct. to Nov.	1986 to 1987	Nov.* 1987	Oct. 1987	Nov. 1986	Oct. to Nov.	1986 to 1987	Nov.* 1987	Oct. 1987	Nov. 1986	Oct. to Nov.	1986 to 1987
TOTAL CIVILIAN LABOR FORCE**	1680.1	1663.7	1625.4	+16.4	+54.7	1045.6	1036.9	1007.6	+8.7	+38.0	325.4	320.1	315.0	+5.3	+10.4
Total Unemployment	93.9	92.1	108.6	+1.8	-14.7	49.7	48.7	56.3	+1.0	-6.6	15.3	14.6	18.3	+0.7	-3.0
Rate	5.6	5.5	6.7	---	---	4.8	4.7	5.6	---	---	4.7	4.6	5.8	---	---
Rate (Sea. Adj.)***	5.7	5.6	6.9	---	---	4.8	4.8	5.7	---	---	4.7	4.5	5.8	---	---
Total Employment	1586.2	1571.6	1516.8	+14.6	+69.4	995.9	988.2	951.3	+7.7	+44.6	310.1	305.5	296.7	+4.6	+13.4

The Above Labor Force Statistics Should Not Be Used for Economic Assistance Programs

NONAGRICULTURAL WAGE AND SALARY EMPLOYMENT BY PLACE OF WORK

NONAGRICULTURAL WAGE AND SALARY EMPLOYMENT BY PLACE OF WORK

	ARIZONA					MARICOPA COUNTY					PIMA COUNTY				
	Nov.* 1987	Oct. 1987	Nov. 1986	Oct. to Nov.	1986 to 1987	Nov.* 1987	Oct. 1987	Nov. 1986	Oct. to Nov.	1986 to 1987	Nov.* 1987	Oct. 1987	Nov. 1986	Oct. to Nov.	1986 to 1987
TOTAL WAGE AND SALARY	1394.8	1387.3	1374.9	+7.5	+19.9	918.6	914.9	903.4	+3.7	+15.2	247.9	245.1	244.7	+2.8	+3.2
Manufacturing	186.3	186.4	186.1	-0.1	+0.2	135.4	135.2	133.5	+0.2	+1.9	30.2	30.3	31.1	-0.1	-0.9
Durable Goods	144.9	145.0	145.4	-0.1	-0.5	106.7	106.6	105.7	+0.1	+1.0	24.8	24.9	25.8	-0.1	-1.0
Stone, Clay and Glass	7.4	7.5	8.1	-0.1	-0.7	4.7	4.7	5.3	+0.0	-0.6					
Primary and Fabricated Metals	15.6	15.6	16.2	+0.0	-0.6	10.5	10.4	10.8	+0.1	-0.3					
Primary Metals	7.4	7.3	7.6	+0.1	-0.2										
Fabricated Metals	8.2	8.3	8.6	-0.1	-0.4										
Machinery	64.8	64.9	64.6	-0.1	+0.2	51.7	51.8	51.3	-0.1	+0.4					
Other Durable Goods	57.1	57.0	56.5	+0.1	+0.6	39.8	39.7	38.3	+0.1	+1.5					
Aircraft and Missiles	26.7	26.6	27.5	+0.1	-0.8										
Lumber and Wood Products (Except Furniture)	8.3	8.4	8.0	-0.1	+0.3										
All Other Durable Goods	22.1	22.0	21.0	+0.1	+1.1										
Nondurable Goods	41.4	41.4	40.7	+0.0	+0.7	28.7	28.6	27.8	+0.1	+0.9	5.4	5.4	5.3	+0.0	+0.1
Food and Kindred Products	9.2	9.5	9.1	-0.3	+0.1	6.1	6.2	6.1	-0.1	+0.0					
Apparel	4.4	4.3	4.8	+0.1	-0.4	3.2	3.1	3.0	+0.1	+0.2					
Printing and Publishing	16.2	16.1	15.6	+0.1	+0.6	11.3	11.3	11.0	+0.0	+0.3					
All Other Nondurable Goods	11.6	11.5	11.2	+0.1	+0.4	8.1	8.0	7.7	+0.1	+0.4					
Mining and Quarrying	11.3	11.2	10.9	+0.1	+0.4	0.6	0.6	0.6	+0.0	+0.0	1.7	1.7	1.6	+0.0	+0.1
Copper Mining	8.6	8.5	8.2	+0.1	+0.4										
Other Mining and Quarrying	2.7	2.7	2.7	+0.0	+0.0										
Construction	99.7	101.6	112.4	-1.9	-12.7	66.4	68.1	76.9	-1.7	-10.5	20.5	20.5	22.1	+0.0	-1.6
Trans., Communications, and Public Utilities	71.6	71.3	68.8	+0.3	+2.8	48.7	48.5	45.9	+0.2	+2.8	10.0	9.9	9.8	+0.1	+0.2
Transportation	32.8	32.5	31.8	+0.3	+1.0	22.6	22.5	21.5	+0.1	+1.1	4.9	4.8	5.0	+0.1	-0.1
Communications and Public Utilities	38.8	38.8	37.0	+0.0	+1.8	26.1	26.0	24.4	+0.1	+1.7	5.1	5.1	4.8	+0.0	+0.3
Trade	339.2	334.9	334.4	+4.3	+4.8	230.9	228.5	228.4	+2.4	+2.5	56.2	55.2	55.2	+1.0	+1.0
Wholesale Trade	64.8	64.3	64.1	+0.5	+0.7	51.1	51.2	51.3	-0.1	-0.2	7.8	7.8	7.4	+0.0	+0.4
Retail Trade	274.4	270.6	270.3	+3.8	+4.1	179.8	177.3	177.1	+2.5	+2.7	48.4	47.4	47.8	+1.0	+0.6
General Merchandise and Apparel	46.1	44.4	45.5	+1.7	+0.6	30.4	29.4	29.8	+1.0	+0.6	7.7	7.3	7.7	+0.4	+0.0
Food Stores	44.7	43.8	42.5	+0.9	+2.2	29.3	28.8	27.8	+0.5	+1.5	7.3	7.1	7.0	+0.2	+0.3
Automotive and Service Stations	32.1	32.2	31.7	-0.1	+0.4	20.1	20.2	20.2	-0.1	-0.1	5.5	5.5	5.4	+0.0	+0.1
Eating and Drinking Places	95.4	94.5	94.6	+0.9	+0.8	61.2	60.3	60.6	+0.9	+0.6	18.0	17.8	18.0	+0.2	+0.0
Other Retail Trade	56.1	55.7	56.0	+0.4	+0.1	38.8	38.6	38.7	+0.2	+0.1	9.9	9.7	9.7	+0.2	+0.2
Finance, Insurance, and Real Estate	91.5	91.4	90.8	+0.1	+0.7	72.1	72.1	71.6	+0.0	+0.5	12.7	12.6	12.5	+0.1	+0.2
Services and Miscellaneous	344.2	343.2	331.3	+1.0	+12.9	232.1	231.6	222.5	+0.5	+9.6	64.3	63.9	61.7	+0.4	+2.6
Hotels and Other Lodging Places	35.7	35.4	32.6	+0.3	+3.1	20.1	19.8	18.4	+0.3	+1.7	6.4	6.3	5.8	+0.1	+0.6
Business Services	75.3	75.5	72.9	-0.2	+2.4	60.3	60.7	58.1	-0.4	+2.2	11.3	11.0	11.1	+0.3	+0.2
Health Services	85.7	85.3	82.2	+0.4	+3.5	56.2	55.9	53.8	+0.3	+2.4	18.2	18.2	17.3	+0.0	+0.9
Other Services	147.5	147.0	143.6	+0.5	+3.9	95.5	95.2	92.2	+0.3	+3.3	28.4	28.4	27.5	+0.0	+0.9
Government	251.0	247.3	240.2	+3.7	+10.8	132.4	130.3	124.0	+2.1	+8.4	52.3	51.0	50.7	+1.3	+1.6
Federal	42.6	42.7	41.6	-0.1	+1.0										
State and Local	208.4	204.6	198.6	+3.8	+9.8										
School	124.2	121.5	117.7	+2.7	+6.5										

* Preliminary
** Labor force, unemployment, and employment are reported by place of residence.
*** Normal seasonal variations have been eliminated to reflect underlying economic trends.
NOTE Prepared in cooperation with the U.S. Department of Labor, Bureau of Labor Statistics.

-- Prepared by Arizona Department of Economic Security, Research Administration (CPS, 1/87)

Nonmetropolitan Counties
Labor Force and Employment
November 1987

	Apache	Cochise	Coconino	Gila	Graham	Greenlee	La Paz
TOTAL CIVILIAN LABOR FORCE*.	15,625	36,725	43,000	12,925	8,675	3,250	4,975
Total Unemployment	2,100	2,950	3,325	1,475	825	350	400
Rate	13.4%	8.0%	7.7%	11.4%	9.5%	10.8%	8.0%
Rate (Seas. Adj.)**. . . .	14.1%	8.0%	7.9%	11.3%	9.8%	11.4%	-INA-
Total Employment	13,525	33,775	39,675	11,450	7,850	2,900	4,575

THE ABOVE LABOR FORCE STATISTICS SHOULD NOT BE USED
FOR ECONOMIC ASSISTANCE PROGRAMS

	Apache	Cochise	Coconino	Gila	Graham	Greenlee	La Paz
TOTAL WAGE AND SALARY. . . .	15,500	24,300	37,475	10,350	5,050	2,875	3,125
Manufacturing.	950	1,325	2,800	1,450	200	75	100
Mining and Quarrying	25	100	100	1,275	0	1,575	0
Construction	1,275	1,150	1,900	250	200	175	175
Trans., Comm., & Pub. Util..	1,975	1,400	2,375	425	175	25	100
Trade.	1,400	5,425	8,475	2,175	1,325	225	1,075
Fin., Insur., & Real Estate.	325	650	850	275	125	25	100
Services and Miscellaneous .	4,475	4,025	9,425	1,900	875	150	700
Government	5,075	10,225	11,550	2,600	2,150	625	875

	Mohave	Navajo	Pinal	Santa Cruz	Yavapai	Yuma
TOTAL CIVILIAN LABOR FORCE*.	30,550	27,375	38,800	9,950	37,625	39,650
Total Unemployment	2,325	2,950	3,325	1,300	1,925	5,625
Rate	7.6%	10.8%	8.6%	13.1%	5.1%	14.2%
Rate (Seas. Adj.)**. . . .	7.7%	11.5%	9.0%	12.0%	5.4%	-INA-
Total Employment	28,225	24,425	35,475	8,650	35,700	34,025

THE ABOVE LABOR FORCE STATISTICS SHOULD NOT BE USED
FOR ECONOMIC ASSISTANCE PROGRAMS

	Mohave	Navajo	Pinal	Santa Cruz	Yavapai	Yuma
TOTAL WAGE AND SALARY. . . .	20,250	20,250	29,575	8,550	23,875	26,850
Manufacturing.	2,625	1,925	3,700	1,250	2,500	1,850
Mining and Quarrying	425	1,150	3,650	0	625	50
Construction	1,400	1,050	1,175	325	2,025	1,600
Trans., Comm., & Pub. Util..	1,150	1,750	1,150	525	875	1,000
Trade.	5,750	3,800	5,025	3,300	6,325	7,800
Fin., Insur., & Real Estate.	900	375	750	300	950	1,025
Services and Miscellaneous .	4,300	5,025	4,125	1,275	5,100	6,325
Government	3,700	5,175	10,000	1,575	5,475	7,200

*Adjusted to the Current Population Survey (CPS) to reflect place of residence.
**Seasonal adjustment not applicable for economic assistance programs.

NOTE--Series for Yuma and La Paz counties start January 1983. Data are not comparable to any past series.

Prepared in conjunction with the U.S. Department of Labor, Bureau of Labor Statistics.

Arizona Labor Force and Employment for Economic Assistance Programs
November 1987

County	Civilian Labor Force	Employment	Unemployment	Rate
Statewide	1,680,076	1,586,175	93,901	5.6%
Apache	15,646	13,537	2,109	13.5
Cochise	36,722	33,783	2,939	8.0
Coconino	42,985	39,664	3,321	7.7
Gila	12,931	11,447	1,484	11.5
Graham	8,672	7,843	829	9.6
Greenlee	3,252	2,899	353	10.9
La Paz	4,962	4,565	397	8.0
Maricopa	1,045,559	995,888	49,671	4.8
Mohave	30,532	28,215	2,317	7.6
Navajo	27,378	24,418	2,960	10.8
Pima	325,396	310,063	15,333	4.7
Pinal	38,801	35,474	3,327	8.6
Santa Cruz	9,963	8,655	1,308	13.1
Yavapai	37,632	35,697	1,935	5.1
Yuma	39,645	34,027	5,618	14.2

These figures are the only official BLS labor statistics to be used for revenue sharing purposes. They are not designed to be used as economic indicators. Note: Series for Yuma and La Paz counties start January 1983. Data are not comparable to any past series.

Arizona Unemployment Insurance Activities
October 1987

	October 1987	September 1987	October 1986	% Change From One Year Ago
Claimants Served*	26,052	29,105	29,861	-12.8%
Average Weeks Unemployed**	9.2	9.4	INA	INA%
Benefits Paid*	$ 9,956,760	$ 11,282,032	$ 11,853,291	-16.0%
Trust Fund Balance	$409,717,299	$412,604,195	$380,523,083	7.7%

*All Programs **UI Only

Estimated Hours and Earnings of Production Workers in Selected Industries
Arizona

INDUSTRY	AVERAGE WEEKLY EARNINGS			AVERAGE WEEKLY HOURS			AVERAGE HOURLY EARNINGS		
	NOV.* 1987	OCT. 1987	NOV. 1986	NOV.* 1987	OCT. 1987	NOV. 1986	NOV.* 1987	OCT. 1987	NOV. 1986
FOR THE STATE OF ARIZONA									
Manufacturing	403.40	406.00	415.06	40.3	40.6	41.3	10.01	10.00	10.05
Aircraft & Missiles	567.23	552.51	INA	43.7	43.3	INA	12.98	12.76	INA
Food & Kindred Products . .	371.70	385.06	396.16	41.3	41.9	42.1	9.00	9.19	9.41
Primary Metals	467.87	476.69	474.67	37.4	37.3	39.1	12.51	12.78	12.14
Machinery	395.76	392.61	382.64	38.8	39.3	39.9	10.20	9.99	9.59
Copper Mining	495.73	499.79	483.83	40.6	40.6	39.4	12.21	12.31	12.28
Construction	421.94	419.76	430.98	36.5	36.0	36.4	11.56	11.66	11.84
Utilities	629.42	584.03	605.19	42.5	41.1	42.8	14.81	14.21	14.14
Retail Trade**	244.50	244.51	238.72	32.6	32.3	32.0	7.50	7.57	7.46
Wholesale Trade	400.97	395.36	383.66	39.7	39.3	40.3	10.10	10.06	9.52

Estimated Hours and Earnings of Production Workers in Selected Industries
Maricopa County

INDUSTRY	AVERAGE WEEKLY EARNINGS			AVERAGE WEEKLY HOURS			AVERAGE HOURLY EARNINGS		
	NOV.* 1987	OCT. 1987	SEP. 1987	NOV.* 1987	OCT. 1987	SEP. 1987	NOV.* 1987	OCT. 1987	SEP. 1987
FOR MARICOPA COUNTY									
Manufacturing	436.89	442.57	435.48	41.1	41.4	41.2	10.63	10.69	10.57
Construction	429.60	428.90	418.99	35.8	35.3	34.8	12.00	12.15	12.04
Retail Trade**	267.15	266.16	278.80	32.9	32.9	34.0	8.12	8.09	8.20
Wholesale Trade	403.61	396.15	388.32	39.3	38.8	38.6	10.27	10.21	10.06

Estimated Hours and Earnings of Production Workers in Selected Industries
Pima County

INDUSTRY	AVERAGE WEEKLY EARNINGS			AVERAGE WEEKLY HOURS			AVERAGE HOURLY EARNINGS		
	NOV.* 1987	OCT. 1987	SEP. 1987	NOV.* 1987	OCT. 1987	SEP. 1987	NOV.* 1987	OCT. 1987	SEP. 1987
*****FOR PIMA COUNTY*****									
Manufacturing	362.39	361.53	360.04	38.8	39.0	37.7	9.34	9.27	9.55
Copper Mining	532.90	519.99	526.26	41.6	41.8	41.8	12.81	12.44	12.59
Construction	378.88	384.75	359.62	37.0	37.5	35.5	10.24	10.26	10.13
Utilities	550.84	554.55	554.60	41.2	41.2	40.9	13.37	13.46	13.56

* Preliminary

** Excludes eating and drinking places.

NOTE--These estimates are based on a sample of full and part-time production and related employees whose payroll and hours are reported for the pay period which includes the 12th of the month. Prepared in cooperation with the U.S. Department of Labor, Bureau of Labor Statistics.

--Arizona Department of Economic Security, Research Administration. (1972 SIC, 1/87)

What Is Happening in the Health Care Industry?

Plenty. The health care delivery system has been in a period of transition for several years. Prior to the 1980s, the health care system was encouraged to grow in order to increase the supply of services to all areas and people of the nation. The consumer, who used to provide nearly one-half of the cost of his or her health care, currently pays only 28 percent and only 10 percent of hospital costs. In effect, payment responsibility has shifted to insurance companies and government programs. The shift in financial responsibility encouraged the development of new technology. But as new technology and new procedures were taking hold, so were higher costs of health care.

In the early 1980s, the cumulative effect of inflation, recession, and escalating costs of health benefits per patient threatened the solvency of the Medicare system. In 1983, legislation was enacted in an attempt to limit the rising costs of health care. The Social Security amendment of 1983 mandated a new system for hospital payments. Under the new system, hospitals are compensated according to a predetermined average cost of patient care. Different rates are assigned for each of the 467 diagnosis-related groups (DRGs), and hospitals are reimbursed according to that schedule. The DRG-based payment system allows hospitals to retain any savings or to absorb any expenses in excess of the amount allocated for the corresponding DRG. Hospitals are thus encouraged to keep their costs down. Under the previous system, Medicare reimbursed hospitals for any amount spent.

Hospitals have responded to the new DRG-based system with procedures to manage admissions and patient flow, monitor the number of tests and interventions ordered by physicians, and control operating expenditures. Data from the American Hospital Association indicate that, since the beginning of 1983, there has been some shift in hospital utilization. The average length-of-stay of patients over 65 years of age dropped to 8.8 days in 1984 from 10.1 days in 1982. In addition, there has been a sharp decline in admissions of all patients under 65. Among the most likely reasons for these shifts in hospital utilization are the built-in incentives of the DRG-based reimbursement system as well as technological developments that have enabled the substitution of ambulatory services for inpatient care, and the use of laser technology which has drastically reduced inpatient recovery periods.

The reduction in demand for inpatient services has prompted hospitals to broaden their range of programs and services, particularly with those unrestricted by DRG schedules. Services, such as hospice care, rehabilitation, alcohol and other drug-dependency treatments, birthing centers, outpatient surgery, geriatric assessment, cancer screening, health education, and even sports-medicine programs are becoming more and more part of many hospitals' regular services.

The expansion of services and cost-containment initiatives has influenced the growth and staffing pattern of workers in the hospital industry. Representing over 50 percent of operating budgets of community hospitals, labor costs are a target when budgetary reductions are on the horizon. A growing trend in this industry is to reduce unnecessary personnel through attrition and, to a lesser extent, the implementation of hiring freezes. On the other hand, to supplement the personnel demand in other areas, hospitals are contracting services, hiring part-time workers, and maintaining a number of on-call staff.

Also, since 1982, an unprecedented rise in the number of individuals enrolled in health maintenance organizations (HMOs) has been occurring throughout the nation. It has been observed that HMO enrollees pay 20 to 40 percent less for health care than those enrolled in fee-for-service health insurance plans. HMO affordability could be attributed to a self-restrained system of health care. HMO physicians are encouraged to reduce unnecessary hospitalizations and nonessential interventions. In addition, HMOs place emphasis on preventive care, ambulatory services, the hiring of multi-specialty staff, and risk-sharing by

ESTIMATED EMPLOYMENT--ARIZONA

Industry (SIC Code)	1980	% Share 1980	1985	% Increase 1980-1985	1990	% Increase 1985-1990
801-804	15,504	29.2	21,118	36.2	NA	----
805	5,561	10.5	9,205	65.5	13,238	43.8
806*	27,498	51.7	37,046	34.7	46,142	24.6
807 and 809	2,145	4.0	2,554	19.1	NA	----
808	1,937	3.6	3,955	104.2	5,681	43.6
80	53,138	100.0	74,061	39.4	96,097	29.8
Total wage and salary	1,018,346	-----	1,278,364	25.5	1,534,270	20.0

* Government hospitals are not included. The estimated employment for government hospitals was 14,012 in 1980 and 12,303 in 1985.

NA = Not available

physicians, all of which translate to lower expenditures.

Also significant is the increase in the number of nursing and personal care facilities and offices of health care practitioners. It is no secret that the segment of the population 65 years of age and over is gaining in proportion. Human life expectancy is lengthening as the bulk of the "baby boom" generation turns gray. The demand for acute, geriatric, and long-term care is expected to continue rising, as is the number of providers of this type of care.

In general, the elements contributing to the reshaping of the health care delivery system nationally are also impacting Arizona's health care system. Nevertheless, in Arizona, there is a unique set of socioeconomic forces influencing the growth of the state's health industry. Since the early 1970s, population growth, in particular, has been a major driving force behind the growth of all industries in Arizona, especially of the health care industry.

Although population growth in the state has begun to taper down, approximately 100,000 new residents have been added to the state's population every year since 1980. During that time, the health care delivery system in Arizona expanded its employment by nearly 38.5 percent, about 6 percentage points higher than the economy wide employment gain over the same period. According to the latest projections, Arizona's health services employment will increase by about 19 percent between 1986 and 1990, while the economy as a whole will rise by only 14 percent during the same period.

The health services industry corresponds to the establishments found under the Major Group code 80 of the _Standard Industrial Classification (SIC) Manual_, and it includes the following groups:

- 801, 802, 803, 804: Offices of all health practitioners
- 805: Nursing and personal care facilities
- 806: Hospitals
- 807: Medical and dental laboratories
- 808: Outpatient care facilities
- 809: Other health services

Although the health care delivery system in Arizona will continue to grow at a faster rate than the economy as a whole, its industry sectors will vary significantly in rate of growth. The state's health care industry will continue to evolve in order to satisfy the demand generated by technological, demographic, and economic forces. These forces will, in turn, continue to redefine all facets of Arizona's health services industry.

Clara Dunn

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New Developments

"New Developments" is featured each month as a service to employers and job seekers. It is a compilation of public announcements of the more significant new construction, grand openings, major hirings and layoffs, and other employer events that have special significance for Arizona labor markets. The announcements are paraphrased and otherwise edited from articles published in newspapers and other periodicals from throughout the state. "New Developments" is limited to space available, and no attempt is made to compile an exhaustive list of all such events that have occurred during the month.

BUSINESS CLIMATE - *Inc*. magazine has again ranked Arizona first in the nation in an annual survey of economic climates among the 50 states. Rankings were based on the number of jobs created from February 1983 to February 1987, the number of new companies formed in 1983 or later, and the number of fast-growth companies in each state. New Hampshire ranked second.

TRANSPORTATION - JIMSAIR Aviation Services of San Diego is planning to buy Arizona Jet Inc. of Phoenix and build a $4 million terminal-hangar complex on 11 acres now occupied by Arizona Jet at Phoenix Sky Harbor Airport. Within the next two years, JIMSAIR will construct two buildings: a 28,125-square-foot hangar and a 10,000-square-foot executive air terminal. The firm will provide fuel and repair services for a variety of aircraft and employ 60 to 70 persons in the Phoenix area.

Piedmont Airlines has become the ninth major U.S. airline to serve Sky Harbor International Airport. Daily non-stop flights from Charlotte, North Carolina, have begun. Service to Baltimore-Washington International Airport will commence on January 6, 1988.

RETAIL TRADE - Home Depot of Atlanta is seeking three new Valley sites. A 119,000-square-foot store is being planned at 67th Avenue and Bell Road in Glendale. Other sites are being explored at Pima and Indian Bend roads in Scottsdale and at Kyrene and Warner roads in Tempe.

Estes Co. will be constructing a $22 million shopping center in Mesa. The 230,000-square-foot center will be on a 23-acre site on the southwest corner of Baseline and Power roads.

The McJobs Program, a training program for individuals with severe disabilities, is being operated by the McDonald's Corporation in the Phoenix area. A job coach trains four to six individuals every eight weeks in any phase of the restaurant's operations in which the individual is interested and shows potential for learning. At the completion of training, the graduates are placed at a McDonald's near their home. For more information, contact either Linda Berg or Pat Wilson at 842-1125.

California-based El Pollo Loco, a fast food chain specializing in charbroiled chicken, is entering the Valley. One site has already been selected at Alma School and Baseline roads in Mesa, and up to nine additional sites will be chosen within the next six months.

Good Times! Drive Thru Burgers Inc., a subsidiary of Round the Corner Restaurants Inc., is planning to open 30 restaurants in Arizona within the next three years. The company will emphasize one-minute service.

CONSTRUCTION - Construction is under way on Barrios Unidos Park, a 15-acre park south of Mohave on 14th Street. The $1.5 million park will have an outdoor amphitheatre, a community center, a lighted softball and soccer field, and picnic tables. Completion is expected by February.

Ground has been broken for the Superblock development in downtown Phoenix. The $515 million project will cover eight blocks with office towers, shops, restaurants, a hotel, and a park. The blocks are bounded by Van Buren, Fillmore, Second, and Fifth streets. The first phase will consist of a 20-story office building to be used as the headquarters of Arizona Public Service Co., a second office building of 15 to 18 stories, a two-story retail and restaurant complex, a parking garage for 2,800 vehicles, and a three-acre park.

Construction has begun on Scottsdale's Shea Boulevard improvements program. Shea will be widened to six lanes from Pima Road to 124th Street. The project will include sidewalks, bikepaths, street lights, and median landscaping. The total cost is estimated at $6 million. Private developers have agreed to fund or construct portions of the roadway that front their respective developments.

The Bureau of Indian Affairs has appropriated $3 million to complete an 11-mile section of the Hopi-Navajo Turquoise Trail that runs between Second Mesa and Hard Rock. Construction should be completed by June.

According to a study by Chicago Title Insurance Co., the Valley ranks as the nation's seventh-leading housing growth market. Comparing the number of new units built with the number of existing households, there were 5.87 housing starts for every 100 existing households in the Valley in 1986. Nationally, the ratio was 2.04 to 100. The Valley is expected to have 37,400 housing starts in 1988.

Foothill Shadows Limited Parnership is building a 332-unit apartment complex at the southeast corner of 92nd Street and Redfield Road in Scottsdale. The complex will have an overall end value of $18 million.

HOTELS - The Ramada Hotel Group has announced that Phoenix will be the new headquarters of Rodeway Inns International Inc., which was acquired by Ramada in June. The transfer from Dallas and anticipated expansion will eventually create up to 50 new corporate staff jobs.

Ramada will also be moving its Ramada and Rodeway Inns reservations centers to Phoenix from Omaha, Nebraska. Expected to create at least 250 jobs in Phoenix, the combined center will be located at 3838 East Van Buren. Most of the jobs will be for reservation clerks. The move should be completed by April 1, 1988.

The Carefree Inn has closed down for a year while undergoing a $10 million to $11 million renovation and expansion. Plans include increasing the number of guest rooms from 193 to 250 and adding meeting rooms and health facilities. About half of the 80 employees have been hired by other Westcor hotels.

The Yavapai Apache Tribe has begun construction on the $4.3 million first phase of Cliff Castle Lodge, a resort-convention center on Montezuma Castle Highway near Interstate 17. The 80-room lodge is expected to open in the spring.

Arizona Labor Market Newsletter
LABOR MARKET INFORMATION PUBLICATIONS
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5/21/88 S0465-1A

ARIZONA LABOR MARKET INFORMATION NEWSLETTER

Vol. XII No. 2
February 1988

Unemployment Rate

Seasonally Adjusted
December*

ARIZONA	5.7%
Maricopa Co.	4.9%
Pima Co.	4.7%
UNITED STATES	5.8%

Consumer Price Index

National-November 1987
1967 - Base Year

Wage Earner/Clerical Worker -	340.4
% Chg. Yr. Ago	4.6
All Urban -	345.8
% Chg. Yr. Ago	4.5

Phoenix-3rd Qtr. 1987
1977 - Base Year

All Urban -	201.7
% Chg. Yr. Ago	4.1

Tucson-3rd Qtr.-1987
1st Qtr. 1983 - Base Qtr.

All Urban -	120.6
% Chg. Yr. Ago	3.7

* Preliminary

The Growing Temporary Help Industry

We often hear that our economy is becoming more service-oriented. But while the services industry in Arizona grew by about 53 percent between the second quarter of 1982 and the second quarter of 1987, one component of that industrial group grew by almost 183 percent. That component was temporary help supply services.

Even though employment within temporary help supply services accounts for only 1.2 percent of total employment covered by Unemployment Insurance (UI) in the state, this segment is one of the fastest growing industries. (The Unemployment Insurance law covers about 98 percent of all wage and salary employment.) During the last five years, while total UI-covered employment grew by 34.1 percent, temporary employment grew by more than five times that rate.

Employment in the temporary help industry is reflected in changing business conditions over the years. It increased 25.3 percent from the second quarter of 1978 to the second quarter of 1979, slowed as the economy was about to enter the 1981-82 recession, but grew faster as the recession deepened. Growth continued at phenomenal rates until the economy was well into recovery. Within the last year of available data, the rate of temporary employment growth again picked up as overall employment growth in Arizona slowed. Employment in the temporary help industry was up to 17,174 in the second quarter of 1987.

Arizona Department of Economic Security
— Moving People Toward Self-Sufficiency

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Barbara Keene, Editor
Linda Van Calcar, Word Processor

Growth in the temporary employment industry in Arizona has come from increasing numbers of establishments in the industry as well as from increasing establishment size. The number of reporting units in the industry rose from 54 in the second quarter of 1977 to 99 in 1982 and 176 in 1987. That represents almost 226 percent growth over the ten-year period. The average number of employees per firm in 1977 was 72. The average actually went down to 61 in 1982, but reached 98 in 1987. The increase in number of firms is largely attributed to low barriers to entry and relatively low start-up costs.

The 1972 Standard Industrial Classification (SIC) manual defines "temporary help supply services" (SIC 7362) as services provided by establishments primarily engaged in supplying temporary help, except agricultural, on a contract basis to other businesses. The help supplied is under the direct or general supervision of the business to which the help is furnished; however, the help is always on the payroll of the supplying establishment.

Other firms that supply workers to businesses on a contract or fee basis include employee leasing firms (SIC 7369) and companies that provide services such as managerial (SIC 7392), janitorial (SIC 7349), or guard (SIC 7393). These jobs are not temporary and, except for employee leasing, the workers are supervised by the supplying firm instead of the customer.

Temporary help firms recruit and screen applicants, check references, administer tests, and sometimes provide training. They have full responsibility as the employer as they hire and fire, issue paychecks, withhold payroll taxes, make required contributions to programs such as Social Security, and are liable under laws concerning health and safety of workers and equal employment opportunities. The temporary employment firm charges an hourly rate equal to the worker's wage plus the firm's markup for its service.

Temporary help firms usually specialize in an office, industrial, medical, or engineering and technical market. Some suppliers of office help also supply industrial workers, while those in the other markets are less likely to cross into another field. Nevertheless, some very large firms have separate divisions that operate in each market.

The National Association of Temporary Services reports that office workers account for 65 percent of all temporary jobs, technical and professional for 14 percent, medical for nearly 12 percent, and industrial for 9 percent.

Among the largest users of temporaries in the office market are companies in services; wholesale and retail trade; manufacturing; and finance, insurance, and real estate. Employees are most likely to be secretaries, typists, receptionists, computer operators, general office clerks, accountants, and sales workers. Many office jobs are easily filled by temporary workers because the basic skills needed for a particular occupation do not vary significantly among employers.

Major users of temporary help in the industrial market are firms in wholesale and retail trade, construction, manufacturing, and transportation. Most of those employees are helpers, laborers, material movers, food and beverage preparation workers, truck drivers, machine operators, assemblers, and craft workers.

Table 1

PERCENT OF EMPLOYMENT GROWTH
ARIZONA

Years and Quarters	Temporary Employment*	Total UI-Covered Employment
1977-2 to 1978-2	-2.7%	27.8%
1978-2 to 1979-2	25.3	9.7
1979-2 to 1980-2	6.1	3.2
1980-2 to 1981-2	6.7	2.1
1981-2 to 1982-2	13.2	-0.7
1982-2 to 1983-2	32.4	3.5
1983-2 to 1984-2	49.7	9.8
1984-2 to 1985-2	17.3	8.4
1985-2 to 1986-2	3.2	4.8
1986-2 to 1987-2	17.9	3.9

* Includes permanent personnel who operate agencies.

SOURCE: DES Research Administration.

Table 2

UI-COVERED TOTAL, SERVICES, AND TEMPORARY EMPLOYMENT
ARIZONA

	1977-2	1982-2	1977-82 % Change	1987-2	1982-87 % Change
Total Employment	703,679	1,031,436	46.6	1,382,836	34.1
Services	146,408	213,282	45.7	327,108	53.4
Temporary*	3,885	6,071	56.3	17,174	182.9
Total Firms	44,128	58,570	32.7	76,785	31.1
Services	13,649	19,506	42.9	26,673	36.7
Temporary*	54	99	83.3	176	77.8
Total Payroll	$1,886,618,924	$4,173,830,535	121.2	$6,789,208,789	62.7
Services	316,513,572	716,210,093	126.3	1,398,446,183	95.3
Temporary*	4,928,205	11,382,315	131.0	45,664,160	301.2

* Includes permanent personnel who operate agencies.

SOURCE: DES Research Administration.

The temporary employment industry entered the medical market during the 1970s when many hospitals were faced with shortages of registered nurses. Today, hospitals, nursing homes, and private households obtain temporary help such as registered nurses, licensed practical nurses, nursing aides, orderlies, and attendants.

Temporary help supply firms that specialize in the engineering and technical field are often called "job shops." Job shop customers include companies in aerospace, electronics, industrial machinery, and chemicals manufacturing, and firms that contract to perform engineering services. Most of the employees are engineers, designers, drafters, engineering technicians, and computer programmers.

Sources of demand for temporary employees include:

1. Short-term changes in need of workers because of seasonal fluctuations or other factors.

2. Absence of permanent employees for vacation or illness.

3. Firms with high fringe-benefit costs.

4. Uncertainty about economic climate.

For short-term jobs, the costs to a company of recruiting and hiring an employee are higher than the markup charged by the temporary help firm. The temporary help firm can also hire more quickly because it maintains contact with large numbers of qualified personnel who are available to work on short notice. Also, if the employee is unsatisfactory, the customer can simply request another.

The demand for temporary help in the office market is usually less sensitive to seasonal and cyclical changes than is the demand for industrial or engineering and technical workers. Nevertheless, increasing office automation has led some companies to turn to temporary help project teams for assistance in the conversion from manual to automated operations. Temporary employees keep the work flow going while permanent workers learn the new system.

The Office magazine conducts a survey of its readership on the subject of temporary help services every other year. Among other questions asked in the 1986 survey was, "For what reasons do you normally use temporary help?" The responses were:

Vacation Replacement	19%
Temporary Replacement	50%
Peak Load Periods	58%
Specialized Work	19%
One-Time Projects	44%
Possible Permanency	16%
Lower Employee Cost	7%
Less Paperwork	3%

Another question was, "For what types of services do you require temporaries?" The answers were:

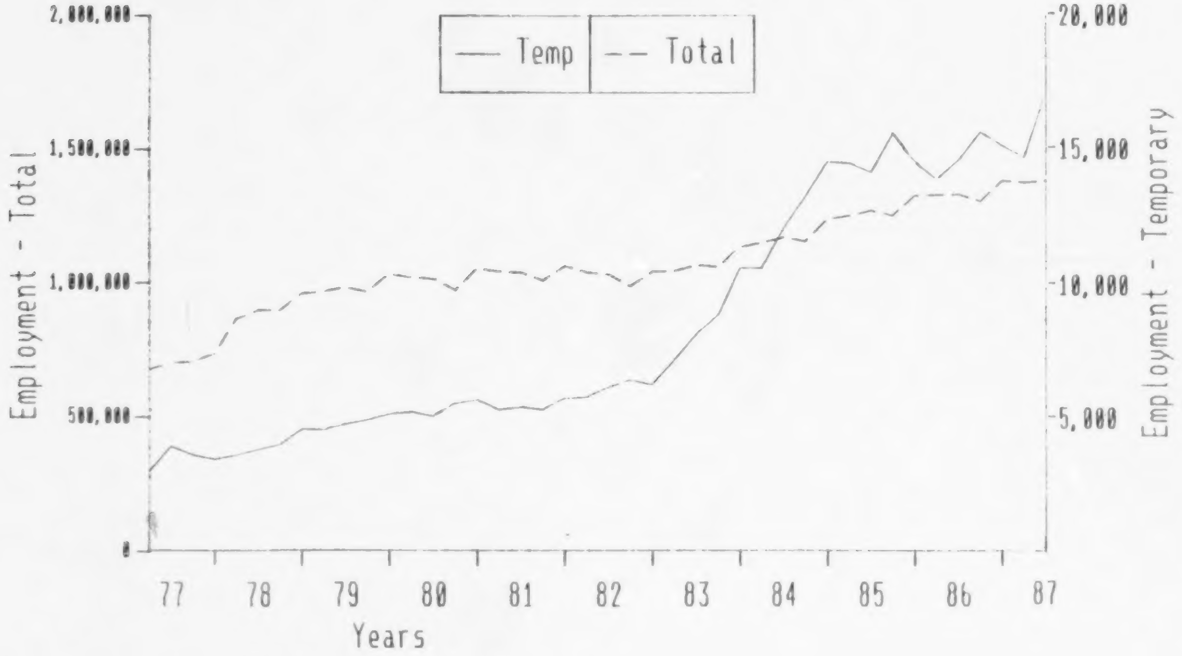
Data Processing	26%
Word Processing	29%
Secretarial	51%
Clerical	62%
Records Management	15%
Filing	31%
Accounting	22%
Other	16%

The need for medical temporaries is greatest during the summer when many regular employees take vacations and patients schedule elective surgery to coincide with their vacations.

The use of temporaries in the engineering and technical market is usually the result of major projects to develop new products or facilities. Assignments typically last from six months to a year and sometimes two years.

Many companies routinely budget for temporary workers. In fact, *Modern Office Technology* reported recently that 60 to 70 percent of all U.S. firms do so. The National Association of Temporary Services has found that 98 percent of U.S. companies use temporaries periodically.

Many companies maintain a "lean staffing" strategy because they cannot afford to keep on staff a complete inventory of every skill that might be needed. Temporary help allows a manager to put together a task force for a special project when needed,



Temporary Employment and Total Employment
Arizona

Source: DES Research Administration

thus helping the company to better respond to change.

The Industrial & Labor Relations Review (July 1985) published a survey indicating the types of companies most likely to use temporaries. Large firms were found to use more temporaries because the firms are more able to identify when temporaries can be used efficiently. Both declining and growing firms are more likely to use temporary workers because they can be added or removed quickly. Also, the higher the amount of fringe benefits paid to permanent workers, the more likely the firm will use temporary employees. Temporary employees usually have fewer fringe benefits than do permanent employees and therefore lower benefit costs.

Uncertainties about the economy make employers less willing to hire additional permanent staff to deal with increases in orders that they think might be only temporary. The companies save on recruitment costs, severance pay, and Unemployment Insurance tax.

To determine who are temporary employees, Wayne J. Howe conducted a study using national data from the May 1985 supplement to the Current Population Survey (CPS). Unlike Unemployment Insurance data, CPS data exclude permanent employees who staff temporary help agencies but also exclude some workers who do not view their jobs as temporary because of continuous attachment to an agency.

Comparing the composition of the temporary employment work force to that of all wage and salary employment, some differences were found. The temporary help industry had larger proportions of women, youth, and blacks than did the total work force. (See Table 3.)

Although some temporary employees seek permanent jobs, others prefer temporary work because they enjoy the schedule flexibility that allows for taking care of children or attending school.

The increase in the number of women entering the labor force has contributed to the available pool of temporary employees. Women re-entering the work force after a lengthy absence can brush up skills, acquire job experience, and gain self-confidence.

Retirees who are unable or uninterested in a full-time employment commitment also seek temporary jobs. In addition, some employees use temporary work to keep their skills up to date or to try a variety of employers. Some nurses have full-time jobs and moonlight to supplement their income.

Others who seek temporary employment include teachers who want to work during the summer and recent college graduates who need some kind of work until they can find employment related to their studies. The variety of assignments and geographic locations may also attract some to the temporary field.

Temporary employment can be extremely helpful to persons entering the labor force for the first time. It offers varied job experience and an opportunity for individuals to learn more about themselves, in terms of the types of work tasks and work settings they prefer. It helps them to gradually adjust to the world of work--getting along with supervisors and co-workers, punctuality, arranging for child care or transportation, and proper clothes and appearance. Temporaries also learn to quickly adapt to new situations.

Employees can choose the days and hours that they are available for work and the frequency and duration of assignments. In the medical market, however, temporaries often get the least desirable shifts.

Job-seeking can be costly in both time and money. Temporary employment firms help

Table 3

EMPLOYED WAGE AND SALARY WORKERS
UNITED STATES, MAY 1985

	All Industries	Temporary Help Supply Industry
Total, 16 years and over	100.0%	100.0%
16-24	20.1	32.7
25-54	67.4	57.6
55 and over	12.5	9.7
Men	55.0	35.8
Women	45.0	64.2
White	86.9	75.4
Black	10.4	20.2
Occupations		
Managerial and professional specialty	24.0	11.0
Technical, sales, and administrative support	31.6	52.1
Administrative support, including clerical	17.3	43.3
Service occupations	13.7	10.8
Precision production, craft, and repair	12.1	4.6
Operators, fabricators, and laborers	16.6	16.9
Farming, forestry, and fishing	2.1	4.4

SOURCE: Wayne J. Howe, "Temporary Help Workers: Who They Are, What Jobs They Hold," Monthly Labor Review, November 1986.

reduce those costs so that workers can spend more time working and less time looking for work. If a person has recently moved to an area, temporary positions assist in learning the city's layout and types of work settings available. For those temporaries who are looking for permanent jobs, temporary jobs can sometimes lead to permanent ones.

As far as pay is concerned, temporary clerical workers are generally paid relatively less than their permanent counterparts. Within the industrial market, temporaries in the least-skilled jobs are paid considerably less because of high costs associated with large turnover and transportation to the work sites. On the other hand, engineers and technicians can often earn more in temporary jobs.

Drawbacks of temporary work include some hostile co-worker and client attitudes, lack of job security, sometimes not enough assignments, and lack of fringe benefits. A temporary can feel isolated from the permanent staff--not included in office social activities, not informed of changes in work procedures, not included in staff meetings, given unpleasant tasks no one else wants to do, and not given advance notice of the end of assignments (no chance to say goodbye to co-workers).

Wren Baldwin has some tips for temporaries, including:

- Never be late.
- Dress like a professional.
- Ask questions.
- Make a chart of people's names and where they sit.
- Check out all details such as lunch hours and scheduled days.
- Be friendly and warm, but not overfamiliar.
- Remember, the employer is in charge.
- Communicate with your agency.
- Take notes on how the client operates.
- Go in with the attitude that you are only there to help.

Roberta L. Coles has the following advice for employers who use temporary help or are planning to do so:

- Provide information to the agency about your office and what its needs are. The worker will need to know dress expectations, parking availability, and directions to the work site.
- Provide a brief orientation when the worker arrives. Keep in mind that temporary work is like starting a new job every day. Have a permanent worker make sure that the temporary has break or lunch plans and an occasional conversation.
- Have proper equipment available.
- Have work ready.

William Olsten, of the Olsten Corporation, offers these tips for success with temporaries:

- Alert the staff.
- Prepare a work area.
- Extend a warm welcome.
- Explain the job.
- Assign a short-term mentor.
- Do not expect the impossible.

The temporary employment industry is subject to some criticism, however. Disgruntled temporaries are becoming more common and vocal. In attempting to overcome some of the complaints, a few agencies have begun offering benefits packages.

Labor advocates sometimes complain that companies use temporary workers to undermine organizing drives and to break strikes. Although many temporary service agencies have a policy not to cross picket lines, the situation does occur.

Rapid growth of employment in the industry is expected to continue, although at slower rates than during the 1982-1984 period. The Research Institute for the Executive expects a 5 percent annual growth rate nationally during the next ten years. The U.S. Department of Labor projects that one out of every 12 workers in the United States will be a temporary employee by 1990.

The temporary employment industry helps distribute labor from companies or industries where demand is low to those where it is high, thus keeping people working. During poor economic times, temporary employment helps reduce unemployment and contributes to the tax base. As of the second quarter of 1987, the industry in Arizona was providing a payroll of over $45 million.

While demand for temporary clerical workers is still high, requests for executives, professionals, and technicians are growing even faster. Automation should increase demand for temporary computer operators, peripheral equipment operators, and secretaries and typists who can operate word processors and personal computers. There may be fewer orders for file clerks, mail clerks, and data entry keyers.

The temporary help industry continues to grow and change. It may lead to eventual restructuring of staffing patterns in various industries and shifting of employment between industries.

Barbara Keene

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The Arizona Labor Force in December

The year of 1987 ended in Arizona with a December unemployment rate of 5.7 percent, down more than a percentage point from a year earlier, and unchanged from November. Unemployment rates were static for the month in Maricopa and Pima counties as well, at 4.9 and 4.7 percent, respectively.

With December employment statistics in, it is tempting to look at over-the-year growth and compare it to the previous years of recovery from the 1982 recession. Those comparisons, however. are better postponed to next month when all of 1987's estimates are available annually benchmarked in relation to employers' reports to the Unemployment Insurance Administration.

All things considered, December 1987 was not a bad month. Total residency-based employment climbed by 4,000, and 5,800 wage and salary jobs were added. December's total employment gain was more than twice that of December of last year (1,800) and almost as good as in December 1985 (4,300). Similar things can be said about wage and salary employment gains (3,800 in December 1986 and 5,900 in December 1985).

Naturally, the big gainer during December was the retail trade sector. Nevertheless, the 3,300 rise was the smallest for retail trade in Arizona since December 1982. Services had a similar weak gain of 1,100, a hundred less than in recessionary 1982. Business services which includes temporary help agencies gained 400, and health services, gearing up for the larger winter population, added 500.

The really good news came in the manufacturing industry. Overall, it gained 500, and 300 of that was in the machinery-manufacturing segment. Machinery employment gains were consistent with news from the semiconductor industry that orders were increasing. In fact, the semiconductor industry reported that it had the best month of increasing orders in three years. Its book-to-bill ratio stood at 1.13. The amount of December employment gain was also the best since December 1984. At last, there seems to be improvement in sales stemming from increasing demand for personal computers and from the falling value of the dollar relative to foreign currencies.

Another industry group helping to boost wage and salary employment growth was transportation, communications, and public utilities (TCPU). The TCPU group added 900, mostly in the transportation component. Although seasonal gains in transportation are normal in December when so many are traveling home for the holidays, it was still the best December gain since 1983.

Among all the industries, construction continued to stand out as the biggest loser. It dropped another 1,300 in December, taking it down more than 10,000 over the year and 19,000 from peak employment in July 1986, ending at a level of 98,200. Although falling mortgage rates may cause some construction improvement in the next few months, there is little reason to believe the industry will return to the levels it attained in 1986. Even holding near to the 100,000 level would be doing well. If the Federal Reserve is forced by the falling dollar to boost interest rates, the trend in construction employment will continue downward.

Central banks in the Group of Seven nations assisted the United States during the week of January 11 by buying dollars. Their intention was to stabilize the dollar and convince investors that the dollar's value relative to the currencies of other industrialized countries had fallen as far as it would go. Whether or not their action will have a long-term effect still is not certain. Recent information that the U.S. deficit foreign trade balance has diminished will help stabilization and perhaps reduce long-term loan interest rates. All of these events may help the construction industry in the months ahead.

Among the rural counties, Apache County's unemployment rate rose to 14.4% edging out Yuma County's 12.3% as the state's highest rate. Yavapai County's rate remained the lowest in rural Arizona at 5.4 percent.

Next month we will look back over the year and determine how accurate our estimates have been. In addition, we will have forecasts for 1988 and 1989 developed from benchmarked 1986, 1987, and earlier data.

Ron Simon

Arizona Labor Force and Employment

December 1987 (in thousands)

	ARIZONA				
				-- Amt Change --	
	Dec.* 1987	Nov. 1987	Dec. 1986	Nov. to Dec.	1986 to 1987
TOTAL CIVILIAN LABOR FORCE**	1681.5	1678.1	1626.9	+3.4	+54.6
Total Unemployment	93.2	93.8	108.3	-0.6	-15.1
Rate	5.5	5.6	6.7	---	---
Rate (Sea. Adj.)***	5.7	5.7	6.9	---	---
Total Employment	1588.3	1584.3	1518.6	+4.0	+69.7

Arizona Labor Force and Employment

December 1987 (in thousands)

	MARICOPA COUNTY					PIMA COUNTY				
				-- Amt Change --					-- Amt Change --	
	Dec.* 1987	Nov. 1987	Dec. 1986	Nov. to Dec.	1986 to 1987	Dec.* 1987	Nov. 1987	Dec. 1986	Nov. to Dec.	1986 to 1987
TOTAL CIVILIAN LABOR FORCE**	1045.6	1044.4	1011.4	+1.2	+34.2	327.1	325.5	314.0	+1.6	+13.1
Total Unemployment	49.3	49.7	57.0	-0.4	-7.7	15.1	15.3	18.2	-0.2	-3.1
Rate	4.7	4.8	5.6	---	---	4.6	4.7	5.8	---	---
Rate (Sea. Adj.)***	4.9	4.9	5.8	---	---	4.7	4.7	5.9	---	---
Total Employment	996.3	994.7	954.4	+1.6	+41.9	312.0	310.2	295.8	+1.8	+16.2

The Above Labor Force Statistics Should Not Be Used for Economic Assistance Programs

NONAGRICULTURAL WAGE AND SALARY EMPLOYMENT BY PLACE OF WORK

	ARIZONA Dec.* 1987	Nov. 1987	Dec. 1986	Nov. to Dec.	1986 to 1987
TOTAL WAGE AND SALARY	1402.9	1397.1	1378.7	+5.8	+24.2
Manufacturing	187.0	186.5	185.5	+0.5	+1.5
Durable Goods	145.3	145.1	144.6	+0.2	+0.7
Stone, Clay and Glass	7.2	7.4	8.0	-0.2	-0.8
Primary and Fabricated Metals	15.4	15.5	16.1	-0.1	-0.7
Primary Metals	7.2	7.3	7.6	-0.1	-0.4
Fabricated Metals	8.2	8.2	8.5	+0.0	-0.3
Machinery	65.3	65.0	64.2	+0.3	+1.1
Other Durable Goods	57.4	57.2	56.3	+0.2	+1.1
Aircraft and Missiles	26.7	26.6	27.5	+0.1	-0.8
Lumber and Wood Products (Except Furniture)	8.4	8.4	8.0	+0.0	+0.4
All Other Durable Goods	22.3	22.2	20.8	+0.1	+1.5
Nondurable Goods	41.7	41.4	40.9	+0.3	+0.8
Food and Kindred Products	9.2	9.2	9.0	+0.0	+0.2
Apparel	4.5	4.4	4.9	+0.1	-0.4
Printing and Publishing	16.2	16.3	15.7	-0.1	+0.5
All Other Nondurable Goods	11.8	11.5	11.3	+0.3	+0.5
Mining and Quarrying	11.3	11.3	11.0	+0.0	+0.3
Copper Mining	8.5	8.5	8.3	+0.0	+0.2
Other Mining and Quarrying	2.8	2.8	2.7	+0.0	+0.1
Construction	98.2	99.5	108.4	-1.3	-10.2
Trans., Communications, and Public Utilities	72.5	71.6	69.5	+0.9	+3.0
Transportation	33.6	32.8	32.6	+0.8	+1.0
Communications and Public Utilities	38.9	38.8	36.9	+0.1	+2.0
Trade	344.9	340.9	340.0	+4.0	+4.9
Wholesale Trade	65.4	64.7	64.3	+0.7	+1.1
Retail Trade	279.5	276.2	275.7	+3.3	+3.8
General Merchandise and Apparel	49.2	47.4	47.8	+1.8	+1.4
Food Stores	45.4	44.9	43.7	+0.5	+1.7
Automotive and Service Stations	31.9	32.0	31.7	-0.1	+0.2
Eating and Drinking Places	96.3	95.5	95.4	+0.8	+0.9
Other Retail Trade	56.7	56.4	57.1	+0.3	-0.4
Finance, Insurance, and Real Estate	91.2	91.5	91.4	-0.3	-0.2
Services and Miscellaneous	345.9	344.8	334.2	+1.1	+11.7
Hotels and Other Lodging Places	35.8	35.7	33.4	+0.1	+2.4
Business Services	75.9	75.5	73.6	+0.4	+2.3
Health Services	86.2	85.7	82.9	+0.5	+3.3
Other Services	148.0	147.9	144.3	+0.1	+3.7
Government	251.9	251.0	238.7	+0.9	+13.2
Federal	42.8	42.6	41.6	+0.2	+1.2
State and Local	209.1	208.4	197.1	+0.7	+12.0
School	125.4	124.1	117.3	+1.3	+8.1

NONAGRICULTURAL WAGE AND SALARY EMPLOYMENT BY PLACE OF WORK

	MARICOPA Dec.* 1987	Nov. 1987	Dec. 1986	Nov. to Dec.	1986 to 1987	PIMA Dec.* 1987	Nov. 1987	Dec. 1986	Nov. to Dec.	1986 to 1987
TOTAL WAGE AND SALARY	923.5	920.3	907.0	+3.2	+16.5	250.2	248.5	244.4	+1.7	+5.8
Manufacturing	136.0	135.5	133.1	+0.5	+2.9	30.4	30.3	31.1	+0.1	-0.7
Durable Goods	106.9	106.7	105.2	+0.2	+1.7	25.0	25.0	25.8	+0.0	-0.8
Stone, Clay and Glass	4.5	4.6	5.2	-0.1	-0.7					
Primary and Fabricated Metals	10.4	10.4	10.8	+0.0	-0.4					
Primary Metals										
Fabricated Metals										
Machinery	52.0	51.8	50.9	+0.2	+1.1					
Other Durable Goods	40.0	39.9	38.3	+0.1	+1.7					
Aircraft and Missiles										
Lumber and Wood Products (Except Furniture)										
All Other Durable Goods										
Nondurable Goods	29.1	28.8	27.9	+0.3	+1.2	5.4	5.3	5.3	+0.1	+0.1
Food and Kindred Products	6.2	6.2	6.1	+0.0	+0.1					
Apparel	3.2	3.1	3.0	+0.1	+0.2					
Printing and Publishing	11.3	11.4	11.1	-0.1	+0.2					
All Other Nondurable Goods	8.4	8.1	7.7	+0.3	+0.7					
Mining and Quarrying	0.6	0.6	0.6	+0.0	+0.0	1.7	1.7	1.6	+0.0	+0.1
Copper Mining										
Other Mining and Quarrying										
Construction	65.5	66.3	73.6	-0.8	-8.1	20.3	20.5	21.6	-0.2	-1.3
Trans., Communications, and Public Utilities	49.0	48.6	46.6	+0.4	+2.4	10.2	10.1	9.9	+0.1	+0.3
Transportation	23.0	22.6	22.1	+0.4	+0.9	5.1	5.0	5.0	+0.1	+0.1
Communications and Public Utilities	26.0	26.0	24.5	+0.0	+1.5	5.1	5.1	4.9	+0.0	+0.2
Trade	234.0	232.0	233.0	+2.0	+1.0	57.7	56.5	55.6	+1.2	+2.1
Wholesale Trade	51.4	51.1	51.4	+0.3	+0.0	7.9	7.8	7.5	+0.1	+0.4
Retail Trade	182.6	180.9	181.6	+1.7	+1.0	49.8	48.7	48.1	+1.1	+1.7
General Merchandise and Apparel	32.4	31.3	31.7	+1.1	+0.7	8.4	8.0	7.9	+0.4	+0.5
Food Stores	29.8	29.4	28.7	+0.4	+1.1	7.4	7.3	7.1	+0.1	+0.3
Automotive and Service Stations	19.8	20.0	20.2	-0.2	-0.4	5.5	5.4	5.3	+0.1	+0.2
Eating and Drinking Places	61.6	61.1	61.3	+0.5	+0.3	18.4	18.1	18.1	+0.3	+0.3
Other Retail Trade	39.0	39.1	39.7	-0.1	-0.7	10.1	9.9	9.7	+0.2	+0.4
Finance, Insurance, and Real Estate	71.9	72.1	72.2	-0.2	-0.3	12.6	12.7	12.5	-0.1	+0.1
Services and Miscellaneous	233.4	232.6	225.1	+0.8	+8.3	64.6	64.4	61.5	+0.2	+3.1
Hotels and Other Lodging Places	20.3	20.1	19.3	+0.2	+1.0	6.5	6.4	5.7	+0.1	+0.8
Business Services	60.9	60.5	58.9	+0.4	+2.0	11.2	11.2	11.0	+0.0	+0.2
Health Services	56.5	56.2	54.2	+0.3	+2.3	18.4	18.3	17.4	+0.1	+1.0
Other Services	95.7	95.8	92.7	-0.1	+3.0	28.5	28.5	27.4	+0.0	+1.1
Government	133.1	132.6	122.8	+0.5	+10.3	52.7	52.3	50.6	+0.4	+2.1

* Preliminary
** Labor force, unemployment, and employment are reported by place of residence.
*** Normal seasonal variations have been eliminated to reflect underlying economic trends.
NOTE Prepared in cooperation with the U.S. Department of Labor, Bureau of Labor Statistics.

-- Prepared by Arizona Department of Economic Security,Research Administration (CPS, 1/87)

Nonmetropolitan Counties
Labor Force and Employment
December 1987

	Apache	Cochise	Coconino	Gila	Graham	Green-lee	La Paz
TOTAL CIVILIAN LABOR FORCE*.	15,657	36,275	42,825	12,850	8,650	3,200	5,025
Total Unemployment	2,175	2,925	3,625	1,550	825	325	400
Rate	13.9%	8.1%	8.5%	12.1%	9.5%	10.2%	8.0%
Rate (Seas. Adj.)**. . . .	14.4%	8.1%	8.1%	11.6%	9.6%	11.0%	-INA-
Total Employment	13,500	33,350	39,200	11,300	7,825	2,875	4,625

THE ABOVE LABOR FORCE STATISTICS SHOULD NOT BE USED
FOR ECONOMIC ASSISTANCE PROGRAMS

TOTAL WAGE AND SALARY. . . .	15,625	24,400	37,225	10,275	5,050	2,875	3,175
Manufacturing.	950	1,350	2,775	1,350	200	25	100
Mining and Quarrying	25	100	75	1,300	0	1,575	50
Construction	1,225	1,150	1,850	250	200	175	175
Trans., Comm., & Pub. Util..	2,175	1,425	2,375	425	175	25	100
Trade.	1,425	5,475	8,475	2,200	1,325	225	1,075
Fin., Insur., & Real Estate.	325	675	850	275	125	25	100
Services and Miscellaneous .	4,475	4,050	9,325	1,900	875	150	700
Government	5,025	10,175	11,500	2,575	2,150	625	875

	Mohave	Navajo	Pinal	Santa Cruz	Yavapai	Yuma
TOTAL CIVILIAN LABOR FORCE*.	30,325	27,500	39,125	9,975	37,750	39,575
Total Unemployment	2,200	3,175	3,475	975	2,225	4,875
Rate	7.3%	11.5%	8.9%	9.8%	5.9%	12.3%
Rate (Seas. Adj.)**. . . .	7.2%	11.9%	9.3%	10.4%	5.9%	-INA-
Total Employment	28,125	24,325	35,650	9,000	35,525	34,700

THE ABOVE LABOR FORCE STATISTICS SHOULD NOT BE USED
FOR ECONOMIC ASSISTANCE PROGRAMS

TOTAL WAGE AND SALARY. . . .	20,250	20,225	29,900	8,950	23,875	27,525
Manufacturing.	2,625	1,900	3,725	1,250	2,450	1,875
Mining and Quarrying	425	1,150	3,650	0	625	50
Construction	1,375	1,050	1,150	325	1,975	1,550
Trans., Comm., & Pub. Util..	1,175	1,750	1,175	550	900	1,050
Trade.	5,750	3,825	5,200	3,625	6,375	8,225
Fin., Insur., & Real Estate.	900	375	775	325	950	1,050
Services and Miscellaneous .	4,250	5,025	4,225	1,325	5,150	6,450
Government	3,750	5,150	10,000	1,550	5,450	7,275

*Adjusted to the Current Population Survey (CPS) to reflect place of residence.
**Seasonal adjustment not applicable for economic assistance programs.

NOTE--Series for Yuma and La Paz counties start January 1983. Data are not comparable to any past series.

Prepared in conjunction with the U.S. Department of Labor, Bureau of Labor Statistics.

Arizona Labor Force and Employment for Economic Assistance Programs

December 1987

County	Civilian Labor Force	Employment	Unemployment	Rate
Statewide	1,681,433	1,588,270	93,163	5.5%
Apache	15,680	13,502	2,178	13.9
Cochise	36,285	33,348	2,937	8.1
Coconino	42,837	39,209	3,628	8.5
Gila	12,841	11,288	1,553	12.1
Graham	8,649	7,836	813	9.4
Greenlee	3,207	2,877	330	10.3
La Paz	5,017	4,616	401	8.0
Maricopa	1,045,642	996,317	49,325	4.7
Mohave	30,325	28,122	2,203	7.3
Navajo	27,480	24,314	3,166	11.5
Pima	327,042	311,975	15,067	4.6
Pinal	39,107	35,638	3,469	8.9
Santa Cruz	9,980	8,996	984	9.9
Yavapai	37,769	35,534	2,235	5.9
Yuma	39,572	34,698	4,874	12.3

These figures are the only official BLS labor statistics to be used for revenue sharing purposes. They are not designed to be used as economic indicators. Note: Series for Yuma and La Paz counties start January 1983. Data are not comparable to any past series.

Arizona Unemployment Insurance Activities

November 1987

	November 1987	October 1987	November 1986	% Change From One Year Ago
Claimants Served*	24,139	26,052	27,464	-12.1%
Average Weeks Unemployed**	INA	9.2	9.2	INA
Benefits Paid*	$ 8,687,143	$ 9,956,760	$ 9,555,573	-9.1%
Trust Fund Balance	$423,131,996	$409,717,299	$392,072,393	7.9%

*All Programs **UI Only

INA = Information Not Available

Estimated Hours and Earnings of Production Workers in Selected Industries
Arizona

INDUSTRY	AVERAGE WEEKLY EARNINGS			AVERAGE WEEKLY HOURS			AVERAGE HOURLY EARNINGS		
	DEC.* 1987	NOV. 1987	DEC. 1986	DEC.* 1987	NOV. 1987	DEC. 1986	DEC.* 1987	NOV. 1987	DEC. 1986
FOR THE STATE OF ARIZONA									
Manufacturing	407.54	404.60	415.66	41.0	40.5	41.4	9.94	9.99	10.04
Aircraft & Missiles	568.71	567.23	INA	44.5	43.7	INA	12.78	12.98	INA
Food & Kindred Products . .	366.16	367.34	389.34	39.8	40.5	42.0	9.20	9.07	9.27
Primary Metals	444.22	461.03	494.14	38.0	37.3	39.5	11.69	12.36	12.51
Machinery	414.93	390.82	383.20	40.6	39.2	40.0	10.22	9.97	9.58
Copper Mining	504.71	497.35	491.63	41.1	40.8	40.1	12.28	12.19	12.26
Construction	430.62	422.30	421.82	36.9	36.5	35.9	11.67	11.57	11.75
Utilities	619.07	637.69	623.22	42.2	43.0	43.4	14.67	14.83	14.36
Retail Trade**	244.45	241.71	240.83	32.9	32.1	32.9	7.43	7.53	7.32
Wholesale Trade	390.85	399.12	377.99	39.6	39.4	40.6	9.87	10.13	9.31

Estimated Hours and Earnings of Production Workers in Selected Industries
Maricopa County

INDUSTRY	AVERAGE WEEKLY EARNINGS			AVERAGE WEEKLY HOURS			AVERAGE HOURLY EARNINGS		
	DEC.* 1987	NOV. 1987	OCT. 1987	DEC.* 1987	NOV. 1987	OCT. 1987	DEC.* 1987	NOV. 1987	OCT. 1987
FOR MARICOPA COUNTY									
Manufacturing	443.52	434.89	442.57	42.0	41.3	41.4	10.56	10.53	10.69
Construction	447.33	435.12	428.90	37.0	36.2	35.3	12.09	12.02	12.15
Retail Trade**	274.12	268.29	266.16	33.8	33.0	32.9	8.11	8.13	8.09
Wholesale Trade	405.82	405.97	396.15	39.4	39.3	38.8	10.30	10.33	10.21

Estimated Hours and Earnings of Production Workers in Selected Industries
Pima County

INDUSTRY	AVERAGE WEEKLY EARNINGS			AVERAGE WEEKLY HOURS			AVERAGE HOURLY EARNINGS		
	DEC.* 1987	NOV. 1987	OCT. 1987	DEC.* 1987	NOV. 1987	OCT. 1987	DEC.* 1987	NOV. 1987	OCT. 1987
*****FOR PIMA COUNTY*****									
Manufacturing	368.28	366.66	361.53	39.6	38.8	39.0	9.30	9.45	9.27
Copper Mining	540.56	532.90	519.99	42.8	41.6	41.8	12.63	12.81	12.44
Construction	377.78	382.58	384.75	36.5	37.0	37.5	10.35	10.34	10.26
Utilities	578.51	574.98	554.55	42.6	42.0	41.2	13.58	13.69	13.46

* Preliminary
** Excludes eating and drinking places.

NOTE--These estimates are based on a sample of full and part-time production and related employees whose payroll and hours are reported for the pay period which includes the 12th of the month. Prepared in cooperation with the U.S. Department of Labor, Bureau of Labor Statistics.

--Arizona Department of Economic Security, Research Administration. (1972 SIC, 1/87)

LMI Publications—Hot Off the Press

The following new or recently revised publications prepared by the DES Research Administration can be ordered from the address on the back of this newsletter or by calling (602) 255-3871. One copy of each publication will be sent at no charge. Multiple copies are available at nominal charge to help cover the cost of printing. Other DES administrations can order these books directly from DES Supply.

How Does Arizona Compare? (PAL-200) presents a wide range of information to assist employers who are considering Arizona as a site for expansion or relocation of their businesses. Others who assist relocation decision makers may also find this publication useful. It provides answers to the most frequently asked questions raised by employers who have called upon the Arizona Department of Economic Security's Research Administration seeking information on topics such as labor availability, demographics, labor force, labor turnover, unionization, wages, fringe benefits, cost of living, housing, utilities, taxation, income, transportation, land, and climate. The appendix section lists the state's Job Service offices and chambers of commerce as well as other labor market information publications and external sources of information helpful to employers.

Arizona Occupational Profiles: Government (PAL-433) and Trade (PAL-440) are two in a series of publications produced from information developed by the Occupational Employment Statistics (OES) survey. The profiles, published every three years, present employment of significant occupations in the government and trade industries. In addition to current estimates, occupational projections for 1989 of the number of job openings due to growth and separations are included for the state and counties.

A new Arizona Occupational Profile: Lodging (PAL-424) has just been published for the first time. The book includes occupational employment estimates and five-year projections for occupations found in Arizona's lodging industry. Included in the lodging industry are commercial and institutional establishments engaged in providing, on a fee basis, any combination of lodging, lodging and meals, and camping facilities. Such establishments include hotels, motels, and tourist courts; rooming and boarding houses; camps and trailer parks; membership organization hotels and lodging houses; and restaurants and lunch counters operated by hotels and other lodging facilities.

The Labor Market Information Directory (PAL-158) is a guide to the wide array of socioeconomic, employment and training, career decision making, and job search publications available through Arizona's Labor Market Information (LMI) program. In the directory, publications are first arranged by subject. Following the subject guide is a complete alphabetical listing of all publications, including their description and geographic coverage. In addition, a matrix revealing the depth in which the topic is treated by most publications is presented, as well as a section on other sources of information available from the private and public sectors. Addresses and telephone numbers to request such information are provided.

New Developments

"New Developments" is featured each month as a service to employers and job seekers. It is a compilation of public announcements of the more significant new construction, grand openings, major hirings and layoffs, and other employer events that have special significance for Arizona labor markets. The announcements are paraphrased and otherwise edited from articles published in newspapers and other periodicals from throughout the state. "New Developments" is limited to space available, and no attempt is made to compile an exhaustive list of all such events that have occurred during the month.

AGRICULTURE - The Navajo Tribe, in a cooperative venture with the Bryn/Y/Madarch Co. of Virginia, is planning to set up a greenhouse at Fort Defiance to determine the feasibility of growing edible mushrooms. Although the pilot project initially will provide only two jobs, tentative plans to establish five mushroom farms throughout the reservation could create up to 125 jobs. The mushrooms will be grown in holes in oak logs.

Construction is under way on an 8,000-square-foot visitor center at the Boyce Thompson Southwest Arboretum on Highway 60, three miles west of Superior. The $750,000 center, the first phase of a multi-phase expansion plan, will be completed next summer. The arboretum is the largest cactus and desert plant garden in the world.

MANUFACTURING - Gates Learjet Corp. has recalled about 250 employees at its plants in Tucson and Wichita, Kansas, to help make two new business jets. The new Model 31 and redesigned Model 55C are scheduled for delivery starting in late 1988.

San Diego-based Universal Publishing Co. has opened a branch in Yuma at 225 South Main Street. The company publishes military base guides, maps, chamber of commerce publications, and telephone directories. The Yuma branch is expected to achieve $500,000 in sales in its first year of operation and $2 million the following year. Two more Arizona sites are being planned.

The Army has awarded a $35,092,135 contract to Hughes Aircraft Co. of Tucson for the production of TOW-2B missiles through early 1990. The company will maintain its current level of employment.

In addition, Hughes Aircraft has received a top corporate award from the Minority Business Development Agency of the U.S. Department of Commerce. The award was for "dedication, enthusiasm, cooperation, and distinguished service in promoting minority business."

McDonnell Douglas Helicopter Co. of Mesa has received a nearly $10 million contract from the Army to determine the feasibility of arming the Apache attack helicopter with Stinger air-to-air missiles. The firm will be responsible for the design, software development, and flight test of the Stinger system through August.

Also awarded to the company was a $399 million contract to build 67 Apache helicopters in fiscal 1988 and a $19 million contract for logistics and ground-support equipment to maintain the aircraft.

Nine small high-tech firms in Arizona have been awarded research contracts by the U.S. Department of Defense. The contracts, which average about $50,000, are intended to provide seed money for defense-related research and to spur technological innovations. The firms receiving the contracts are Advanced Materials Testing Co., Mesa; APTEC Inc., Scottsdale; General Pneumatics Corp., Scottsdale; Lighting Sciences Inc., Scottsdale; Materials & Electrochemical Research Corp., Tucson; QO Inc., Sierra Vista; Simula Inc., Phoenix; Space Data Corp., Tempe; and Vista Research Corp., Sierra Vista.

California-based Lifetile Corp. is building a $2.1 million facility in Casa Grande. The concrete roof tile manufacturing plant is expected to bring 50 jobs to the area in 1988. The 60,000-square-foot facility will be located at 1742 Roof Tile Road.

America-West Industries will be expanding its yarn-making facility in Yuma. When the expansion is completed, employment will be increased to about 300 from 200.

Deer Valley Block Manufacturing Inc. is building a $4 million facility at the southeast corner of 16th Street and Deer Valley Road. Initially employing 16 workers, the new plant will produce up to 250,000 blocks per week in a range of colors, sizes, and styles.

Talley Industries Inc. has established a new subsidiary, Talley Automotive Products Inc., to manufacture automobile air bags. Employing 150 to 200 people when it begins production in mid-1988, the company will operate out of a new $16 million facility near Falcon Field in Mesa. Annual revenues from air-bag products are expected to exceed $140 million by 1990.

Honeywell Bull is cutting its Phoenix work force by 800 employees as part of a major restructuring of U.S. operations. The company will no longer manufacture mainframe computers at its Deer Valley plant. Engineering, marketing, and other management functions will continue in the Valley. In fact, the company plans to hire an additional 125 software engineers by the end of 1988. The reduction of employees will be accomplished over the year by attrition, early retirement, and voluntary and involuntary layoffs.

The Taiwan Cotton Finishers Association is planning to build a finishing plant in Arizona in the next two or three years. The plant will employ 200 to 300 people.

RECREATION - Brunswick Recreation Centers is building a $4 million, 40-lane bowling center at Ray and Price roads in Chandler. Completion is scheduled for May 1988.

Pleasant Lanes bowling center is under construction at the southwest corner of Kyrene Road and Chandler Boulevard in Chandler. The 40-lane facility will employ about 50 people.

Scottsdale Lakes Golf Club, a $6 million golf course, is under construction. The 160-acre course is part of a planned 200-acre resort that includes a hotel, a sports facility, and residential development. Scheduled for completion in Fall 1988, the course is located on the Indian Bend Wash and Interceptor Canal on both sides of Hayden Road.

Construction will begin soon on a $5 million golf course at the Pointe at Tapatio Cliffs. The 18-hole championship golf course, scheduled for completion in December 1988, is being built on 166 acres at 11111 North Seventh Street.

HOSPITALS - The Lutheran Health Care Network cut 32 managerial, supervisory, and support-service positions in October at its Mesa Lutheran and Valley Lutheran hospitals in Mesa as part of a cost-reduction program. Twenty-one positions in the marketing and finance departments were cut in September in addition to the equivalent of 23.7 full-time positions cut earlier in the year.

Construction is expected to begin soon on the new 160-bed Phoenix Children's Hospital. The hospital has been leasing beds in Good Samaritan Medical Center. The new building could cost between $25 million and $30 million.

INCOME - According to the U.S. Department of Commerce, personal income in Arizona grew 57.6 percent between the third quarter of 1982 and the second quarter of 1987. Arizona had the highest rate of personal income growth in the nation, followed by Georgia, 54.4 percent, and New Hampshire, 53.8 percent.

TRIBAL JOBS - The Navajo Tribal Council has approved an $87 million budget that will create 130 new jobs in the areas of economic development and education. The new jobs, however, will be partially offset by the elimination of 77 jobs in other programs.

EDUCATION - The Osborn Elementary School District will be building a $5 million middle school at the Grandview School campus, 12th Avenue and Camelback Road. Construction will begin in the late spring or early summer and will be completed by the fall of 1989.

A new $5 million building is under construction for the Center for Creative Photography at the University of Arizona. The three-story, 50,000-square-foot building is expected to open in the spring of 1989.

REAL ESTATE - Conventry Homes has recently opened three developments in the Valley. The Glen at Meadowbrook is a subdivision located at 99th Avenue and Campbell. When completed, 102 two- to five-bedroom homes will be available, ranging in size from 1,963 to 2,583 square feet. Features will include two-car garages, masonry fences, and finished or unfinished basements.

Newport at Mountainside is a planned community of family basement homes at 42nd Street, south of Chandler Boulevard in Phoenix. The subdivision will contain 109 three- to five-bedroom homes. Prices will range from $98,950 to $117,950.

The Harbor Club at Ocotillo is a subdivision of single-family homes at Queen Creek and Price roads in Chandler. The community will consist of 93 three- to five-bedroom homes, featuring basements and heat pumps. Prices will range from $129,950 to $152,950.

Warner Ranch Place, a residential development of 190 homes, has been opened by UDC Homes between Warner and Ray roads in Tempe, near the intersection of Rural Road. The three- to five-bedroom homes are priced from $118,500 to $154,500.

Coscan Arizona Inc. has opened Royal Palms, a subdivision on McClintock Drive south of Elliot Road in Tempe. The 65 Spanish-style homes range in price from $142,990 to $172,990. Standard features of the four- and five-bedroom houses include family rooms, fireplaces, vaulted ceilings, and covered patios.

Trade Winds at Twelve Oaks has been opened by Trade Winds Development and Construction Inc. at Rural Road and Chandler Boulevard in Chandler. The subdivision features single-family homes in the $70,000 to $90,000 price range.

RETAIL TRADE - Walgreen Co. recently opened new stores at 5255 East Brown in Mesa, at Mountain View and Via Linda in Scottsdale, at Seventh Street and Baseline in Phoenix, and at 19th Avenue and Union Hills in Phoenix. Within the year, stores will also open at 32nd Street and Thunderbird and at 43rd Avenue, both in Phoenix. A typical Walgreen's store employs 30 people.

Six new Dallas-based Tony Roma's restaurants, called Tony Roma's A Place for Ribs, will be opening in the Valley. The first of the restaurants, which specialize in barbecued items, has opened at 1837 West Guadalupe Road in Mesa.

Fry's Food Stores of Arizona Inc. has opened new stores at 4422 East University in Mesa and at 7435 West Cactus in Peoria. The company will start construction on another site in late 1988 at 91st Avenue and Olive. A future site is also planned for the southwest corner of Warner Road and Cooper. Average construction cost is $1.5 million per store.

Earnhardt Jeep-Eagle has opened a dealership at 3300 North Scottsdale Road in Scottsdale. The 5.5-acre facility houses from 500 to 600 new and used vehicles and employs about 100 workers.

Bashas' Markets Inc. has opened two grocery stores in Mesa, one in Chandler, and one in Snowflake-Taylor. Expected to open in 1988 are stores in Payson, Glendale, and Window Rock. A typical store employs 85 to 95 employees. Prototypes for future development, the Mesa stores include larger aisles, a service kiosk, a salad bar, a dining area for 40 customers, more than 100 bins of bulk items, self-service bins of baked goods, a floral shop, a card and magazine shop, a video shop, and other departments.

The Window Rock store will be part of a shopping center that will include a variety store, a fast-food restaurant, and several Navajo businesses. Ground breaking is expected in February.

The $4 million Islands Plaza Shopping Center at McQueen and Warner roads in Gilbert is under construction. The 100,000-square-foot center will house an ABCO Market, a Revco Drug, a daycare center, and other retail shops.

Under construction at 35th Avenue and Greenway in Phoenix is Rancho Encanto Plaza. The $3 million, 71,500-square-foot center will include an ABCO Market, Thrifty Drug, and three retail shops.

Pep Boy's Inc. of Los Angeles is planning to open four more stores in the Valley by the end of 1988, bringing the total to 21 stores in Arizona. Each store is designed to be a one-stop shopping automotive supply store.

CONSTRUCTION - Loup-Miller Cos. of Denver is building an $11 million apartment complex in Chandler. The 252-unit complex, at the northwest corner of Alma School Road and Summit Place, is scheduled to open in October 1988. The company plans to develop up to ten projects in the Valley in the next few years.

Construction has begun on Summit East, a residential community south of Shea and Fountain Hills boulevards. Scheduled to open in early 1989 are an 18-hole golf course and a clubhouse.

The 3800 Tower, formerly the Del E. Webb building, is undergoing a $6 million renovation. Work on the 17-story building, at 3800 North Central Avenue in Phoenix, will include reglazing, adding a roof pyramid, constructing a grand entry, creating a clock tower, refurbishing the lobby, redesigning restrooms, and improving access to tenant/visitor parking.

The Arizona Department of Transportation has awarded a $5.2 million contract to Pulice Construction Inc. for a road and bridge project near Holbrook. The bridge will span the Little Colorado River at State Route 77.

Cottage Development Co. will be constructing 31 cottages in the Forest Highlands development. Located six miles south of Flagstaff, east of U.S. Highway 89A, the two- and three-bedroom homes will range in size from 1,636 to 2,485 square feet.

Construction is beginning on the first phase of a 120,000-square-foot office, retail, and industrial center in Tucson. The four buildings, totaling 78,560 square feet, will be located near Euclid Avenue and East Broadway.

A 72,000-square-foot, three-story office building will be built at Virginia and First avenues in Phoenix. Construction of the $11 million project will begin in April.

Signature Homes has broken ground for the development of 57 single-family detached homes east of Price Road and south of Queen Creek Road. Priced between $124,000 and $175,000, the homes will have a classical mediterranean design.

ARIZONA BUSINESSES - *Forbes* magazine has named PCS Inc. of Scottsdale as the fifth-best-performing small company in the nation based on average annual return on equity. PCS, a clearinghouse for payment of prescription-drug claims, had an average return of 54.3 percent during the latest 12-month period and sales of $59.6 million. The company currently employs 650 people and plans to add about 125 jobs within the year.

Forbes had evaluated more than 5,000 companies with sales between $1 million and $315 million. The top firm was Value Line of New York.

HOTELS - The Lexington Hotel is under construction in Tempe. The 130-suite hotel is being built east of Elliot Road and Interstate 10.

Ground has been broken on the $8 million Days Inn at 7026 East Main Street in Mesa. Scheduled to open in fall 1988, the 160-room hotel will feature 40 suites, 120 rooms, and 1,900 square feet of meeting and banquet space.

COPPER MINING - Inspiration Consolidated Copper Co. is putting in a $5 million improvement to its electrical system used in copper recovery and refining at the open-pit mine near Miami. The new system, operating on an alternating current of 60 cycles per second, will replace the outdated 25-cycles-per-second equipment, thus lowering operating costs. Most of the components being replaced are at least 62 years old.

Inspiration will also be spending $15 million on its Globe facility in order to increase copper production from leach-solvent extraction and reduce its costs. The expansion is expected to result in a 25 percent increase in copper production and a five-cent-per-pound reduction in expenses. The company produces 100 million pounds of copper annually through the solvent-extraction process.

Arizona Labor Market Newsletter
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Phoenix, Arizona 85005

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8/10/88 S0465-1

ARIZONA LABOR MARKET INFORMATION NEWSLETTER

Vol. XII No. 3
March 1988

Unemployment Rate

Seasonally Adjusted
January*

ARIZONA	5.7%
Maricopa Co.	4.8%
Pima Co.	4.8%
UNITED STATES	5.8%

Consumer Price Index

National-December 1987
1967 - Base Year

Wage Earner/Clerical
Worker - 340.2
% Chg. Yr. Ago 4.5

All Urban - 345.7
% Chg. Yr. Ago 4.4

Phoenix-4th Qtr. 1987
1977 - Base Year

All Urban - 202.7
% Chg. Yr. Ago 4.7

Tucson-4th Qtr. 1987
1st Qtr. 1983 - Base Qtr.

All Urban - 121.7
% Chg. Yr. Ago 4.6

* Preliminary

Arizona Outlook

The Annual Forecast Issue

It is that time of year again when we look into our crystal ball and forecast Arizona's employment and unemployment for the years ahead. The most important information that our crystal ball needs is past employment data.

The Arizona Department of Economic Security (DES) Research Administration cooperates with the U.S. Bureau of Labor Statistics (BLS) in various federal programs. Most important of those are the Current Employment Statistics (CES) program and the ES-202 program. The CES program estimates nonagricultural wage and salary employment every month, while the ES-202 program counts the actual number of those employed. Employers covered by Unemployment Insurance report ES-202 data quarterly by Standard Industrial Classification (SIC) code. The actual ES-202 data lag the CES estimates by about two quarters. Early each year, the CES employment estimates are adjusted to ES-202 employment. This process, in which the CES monthly estimates are aligned with the ES-202 actual count of employment, is called "benchmarking." Employment statistics are revised or benchmarked for the prior two years. (Data for 1986 and 1987 have recently been benchmarked.) The revised data are compiled in the Arizona Employment Forecasting Model (AEFM).

DES Arizona Department of Economic Security
— Moving People Toward Self-Sufficiency

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Barbara Keene, Editor
Linda Van Calcar, Word Processor

AEFM is an econometric model of employment and unemployment in Arizona, Maricopa County, Pima County, and the balance of the state. The model is structured such that the state is the summation of the three substate regions. Each year, Research Administration economists update and modify the model to better forecast the economy. The primary purpose of the forecasts is to aid and improve the planning of DES administered programs. The forecasts, however, can be of value to others in the private and public sectors who are interested in the economy of Arizona. Since the immediate past has significant bearing on the immediate future, the next section looks at 1987.

Jalal Ahmad

Arizona in 1987

Revised "benchmarked" statistics reveal that during 1987, a total of 50,000 new resident workers were added to the employment base while 8,000 residents left the unemployment rolls. As a result, the statewide annual average unemployment rate fell to 6.3 percent in 1987 from an annual average rate of 6.9 percent in 1986. The drop in the number of unemployed can be due to a number of reasons. For example, as employment opportunities become tight, discouraged job seekers leave the labor force temporarily. Secondly, many may leave the state for better opportunities elsewhere. Final numbers suggest that both of these factors had negative influence on our labor force growth. Arizona's labor force grew by a modest rate of 2.7 percent in 1987 compared to 6.4 percent in 1986.

Modest growth was also registered in nonagricultural employment by place of work. Nonagricultural wage and salary employment increased by a modest rate of 3.4 percent last year. About 45,900 wage and salary jobs were added, 13,300 fewer than were added in 1986. The reduced rate of growth from the previous year was due to the poor performance of the manufacturing industry and the rapid decline in construction employment.

The industries that performed well were services; trade; transportation, communications, and public utilities (TCPU); and finance, insurance, and real estate (FIRE). Services and trade added 34,000 new jobs out of the total 45,900 jobs added in 1987. These two population- and tourist-serving industries continue to grow as long as new residents and visitors come to the state. TCPU as a group outpaced all other industries in terms of growth rates. It grew by nearly 10 percent and added 6,100 jobs. Most of the growth in this industry took place in trucking, mostly to support wholesale trade. FIRE grew by 6.2 percent this year after two years of nearly double-digit growth. The rate of growth has fallen from the previous year because of the maturing reaction to deregulation of the finance industry and the declining construction industry.

The revised statistics also reveal that the mining industry has responded positively to increases this year in the price of copper and added 400 new jobs in 1987. This was the first increase in employment after five years of continuous decline.

It is remarkable that the nonmetropolitan counties together grew at a faster rate

LABOR FORCE GROWTH
(Annual Averages, In Thousands)

	Arizona				Maricopa County			
	1986	1987	Change	%	1986	1987	Change	%
Labor Force	1,572.0	1,614.0	42.0	2.7	973.3	1,001.1	27.8	2.9
Unemployed	109.0	101.0	-8.0	-7.3	54.3	52.1	-2.2	-4.1
Unemployment Rate	6.9%	6.3%	-0.6	---	5.6%	5.2%	-0.4	---
Total Resident Employment	1,463.0	1,513.0	50.0	3.4	919.0	949.0	30.0	3.3

	Pima County				Balance of State			
	1986	1987	Change	%	1986	1987	Change	%
Labor Force	303.0	306.6	3.6	1.2	295.7	306.3	10.6	3.6
Unemployed	17.3	15.5	-1.8	-10.4	37.4	33.4	-4.0	-10.7
Unemployment Rate	5.7%	5.1%	-0.6	----	12.6%	10.9%	-0.7	----
Total Resident Employment	285.7	291.1	5.4	1.9	258.3	272.9	14.6	5.7

WAGE AND SALARY EMPLOYMENT GROWTH
(Annual Averages, In Thousands)

	Arizona				Maricopa County			
	1986	1987	Change	%	1986	1987	Change	%
Total Wage and Salary Employment	1,337.8	1,383.7	45.9	3.4	882.6	912.7	30.1	3.4
Manufacturing	184.6	187.2	2.6	1.4	132.3	135.7	3.4	2.6
Mining	11.0	11.4	0.4	3.6	0.5	0.6	0.1	20.0
Construction	113.1	102.4	-10.7	-9.5	78.7	69.2	-9.5	-12.1
TCPU*	65.9	72.0	6.1	9.3	43.9	49.0	5.1	11.6
Trade	325.6	339.5	13.9	4.3	222.6	230.9	8.3	3.7
FIRE**	88.9	94.4	5.5	6.2	70.4	74.8	4.4	6.3
Services	323.8	343.9	20.1	6.2	218.0	231.6	13.6	6.2
Government	225.0	232.9	7.9	3.5	116.3	120.9	4.6	4.0

	Pima County				Balance of State			
	1986	1987	Change	%	1986	1987	Change	%
Total Wage and Salary Employment	239.6	243.8	4.2	1.8	215.6	227.2	11.6	5.4
Manufacturing	31.6	31.0	-0.6	-1.9	20.7	20.5	-0.2	-1.0
Mining	1.7	1.6	-0.1	-5.9	8.8	9.2	0.4	4.5
Construction	21.4	19.5	-1.9	-8.9	13.0	13.7	0.7	5.4
TCPU*	9.2	9.5	0.3	3.3	12.7	13.5	0.8	6.3
Trade	53.7	55.2	1.5	2.8	49.3	53.4	4.1	8.3
FIRE**	12.1	12.7	0.6	5.0	6.4	6.9	0.5	7.8
Services	61.3	64.6	3.3	5.4	44.5	47.7	3.2	7.2
Government	48.6	49.6	1.0	2.1	60.2	62.4	2.2	3.7

* TCPU = Transportation, Communications, and Public Utilities.
** FIRE = Finance, Insurance, and Real Estate.

NOTE: Totals may not add due to rounding.

NONMETROPOLITAN COUNTIES
WAGE AND SALARY EMPLOYMENT GROWTH
(Annual Averages, In Thousands)

County	1986	1987	Change	Growth Rate
Apache	14,900	15,225	325	2.2%
Cochise	23,850	24,700	850	3.6
Coconino	35,675	38,450	2,775	7.8
Gila	9,800	10,250	450	4.6
Graham	4,700	4,825	125	2.7
Greenlee	2,800	3,175	375	13.4
La Paz	2,950	3,175	225	7.6
Mohave	19,375	21,400	2,025	10.5
Navajo	19,375	19,800	425	2.2
Pinal	27,275	28,900	1,625	6.0
Santa Cruz	8,350	9,075	725	8.7
Yavapai	22,450	23,525	1,075	4.8
Yuma	24,225	25,725	1,500	6.2

than the metropolitan counties. In 1987, wage and salary employment in the nonmetropolitan counties grew by 5.4 percent, whereas in Maricopa County it grew by 3.4 percent, followed by 1.8 percent growth in Pima County. This is because the majority of the new construction and manufacturing employment that led the recovery was in the metropolitan areas. As these industries, especially construction, experienced negative growth, the metropolitan areas suffered the greater losses.

Growth, however, was not homogeneous throughout the nonmetropolitan counties. Wage and salary employment growth rates ranged from 2.2 percent in Apache and Navajo counties to 13.4 percent in Greenlee County. Generally speaking, the nonmetropolitan counties having manufacturing and tourism as their base contributed the most toward higher state growth.

Overall, 1987 was not a bad year, but also not a good year, as it continued through the fifth year of recovery from the last recession. Before looking ahead to 1988 and beyond, assumptions behind our forecasts are explained and pertinent national events are highlighted.

Jalal Ahmad

Employment Forecasts for 1988 and 1989

Forecast Assumptions and National Variables

In recent years, the economy of Arizona has diversified its industrial base, although agriculture still plays an important role in the local economy. Because of this diversity, the national economy directly influences our economy. So to forecast Arizona's economy into the future, a few key assumptions must be made. Accordingly, assumptions were made regarding a few national economic variables and were incorporated into the Arizona Labor Market Econometric Model to forecast employment in Arizona during the next two years. The key assumptions are explained in the following.

Real Gross National Product (GNP) is expected to grow at a moderate rate of 2.0 percent in both 1988 and 1989, and much of the growth this year should occur in the second half of 1988. During this year, a compositional shift in GNP away from consumption and toward trade and investment will continue.

Inflation, as measured by change in the U.S. Consumer Price Index (CPI) for all urban consumers, is expected to increase by a moderate rate of 4 to 4.5 percent in 1988, followed by 5 to 5.5 percent in 1989.

The forecast also assumes that oil prices will become firm in the second half of 1988, followed by a small increase in 1989. The decline in the first six months of 1988 is due mainly to OPEC's failure to reach a new production limitation agreement last December.

Also, the dollar is expected to fall further and improve our trade balance in 1988 and the year after. Growth in the money supply has been moderate in the last 12 months, indicating that the Federal Reserve is pursuing a tight monetary policy. But by other measures, it is not. Periods of tight money supply are usually accompanied by a relatively flat or lower return on bonds. Currently, the return is still steep.

Interest rates in early 1988 should ease a little in response to a weak economy. But by mid-1988 accelerating economic growth, the resurgence of inflationary expectations, and continued downward pressure on the dollar are expected to lead to a policy shift by the Federal Reserve Board toward sustained credit tightening. As a result, interest rates should tend to go higher in the second part of 1988 and 1989. The Fed, however, might not tighten too much in an election year.

On the fiscal side, the Tax Reform Act of 1986 went into effect in January of 1988. The tax increase this year will mostly come from corporate profit, excise, and payroll taxes. The federal budget is unlikely to receive much attention this year. All of the tough budget questions will be pursued into 1989, although the deficit will be a key topic of debate on the campaign trail.

Jalal Ahmad

Arizona

In spite of the uncertain outlook for the national economy, Arizona's economy should continue to expand through the next two years. The rate of growth is expected to be very modest, but higher than the national average.

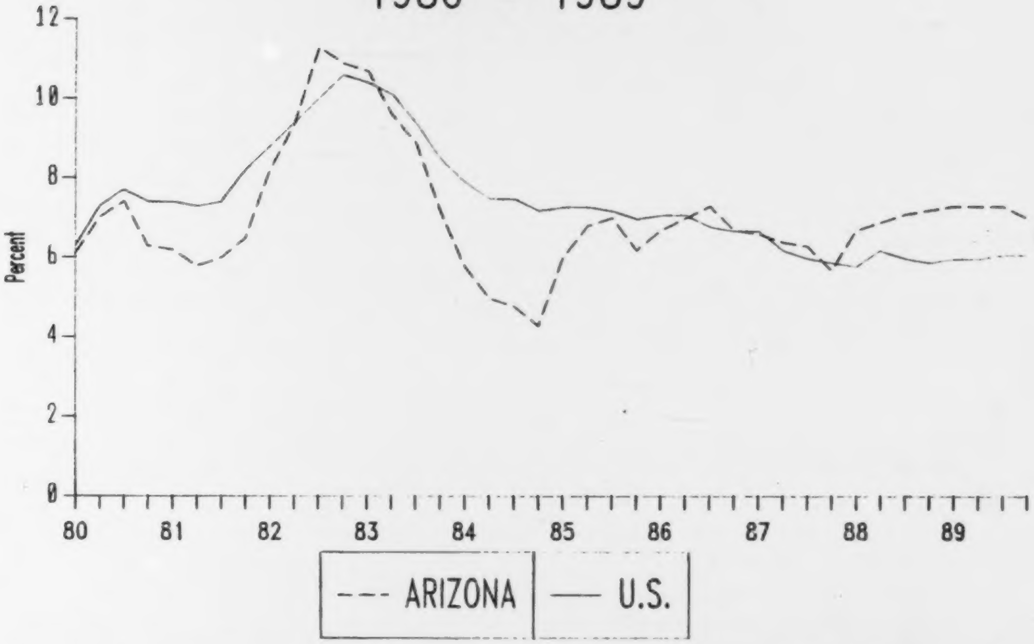
During the current expansion period, Arizona has consistently grown more rapidly than the national average. For example, rates of growth in Arizona wage and salary employment versus growth rates in national wage and salary employment were:

	Arizona	United States
1984	9.5%	4.8%
1985	8.1%	3.2%
1986	4.6%	2.1%
1987	3.4%	2.5%

Clearly, the gap between Arizona and U.S. growth rates has narrowed, but the factors which contributed to growth in the last four years should continue to support future economic expansion in Arizona.

Revised statistics reveal that Arizona's unemployment rate fell to an annual average rate of 6.3 percent in 1987 from 6.9 percent in 1986. The drop in the rate was due principally to slower labor force growth. The Arizona labor force grew by only 2.7 percent in 1987 compared to 6.4 percent in 1986. In the near term, however, the continued loss of construction employment and slow growth in manufacturing are expected to push the state's annual average unemployment rate to 7.0 percent in 1988, followed by a rate of 7.2 percent in 1989.

Given the weak national economy, Arizona is expected to experience wage and salary employment growth of only 3.1 percent in 1988, followed by similar growth in 1989. Reasons for slow growth in the next two years are the expected continuing decline



ARIZONA VS. U.S.
UNEMPLOYMENT RATES
1980 - 1989

in construction employment, a slow response by Arizona's manufacturing industry to the fall of the dollar in foreign exchange markets, and slower labor force growth.

In 1987, employment in the construction industry fell by 9.5 percent, continuing the trend begun in July 1986. A further decline of 9.0 percent is expected in 1988, followed by a marginal increase of 0.2 percent in 1989. Most of the loss in 1988 is expected to occur in multifamily housing and commercial building construction because vacancy rates are still reported to be very high. It is expected that employment in single-family housing construction will increase slightly during the second half of 1988, but not enough to offset losses elsewhere. Declines in mortgage rates are not expected to be large enough, or occur soon enough, to have a significant impact on the industry. Also, several heavy-construction projects are already completed, and some are near completion, which will negatively affect construction employment in 1988.

The second factor that has constrained employment growth has been the performance of manufacturing. The fall of the dollar in foreign exchange markets has stimulated the demand for American goods, and U.S. industrial production has increased. Arizona manufacturing, however, has not yet responded positively. Modest gains in electrical machinery employment have been offset by slow growth or no growth in the defense sector. It is expected that the semiconductor industry will respond positively as the dollar falls further or remains at its low level, but the positive growth will continue to be offset by the decline in defense-related employment. The outlook for defense-related employment is not positive, given the tight national budget situation. Taking all this into consideration, the manufacturing industry is expected to grow by 2.0 percent in 1988, followed by 2.8 percent in 1989.

On the positive side, enough jobs will be created by the service sector of the economy (TCPU, trade, and services) to prevent a recession from occurring in Arizona during the next two years. In 1988, a total of 43,100 new jobs should be created, followed by about 44,600 jobs in 1989.

At the substate level, Maricopa County is forecast to contribute about 26,300 new

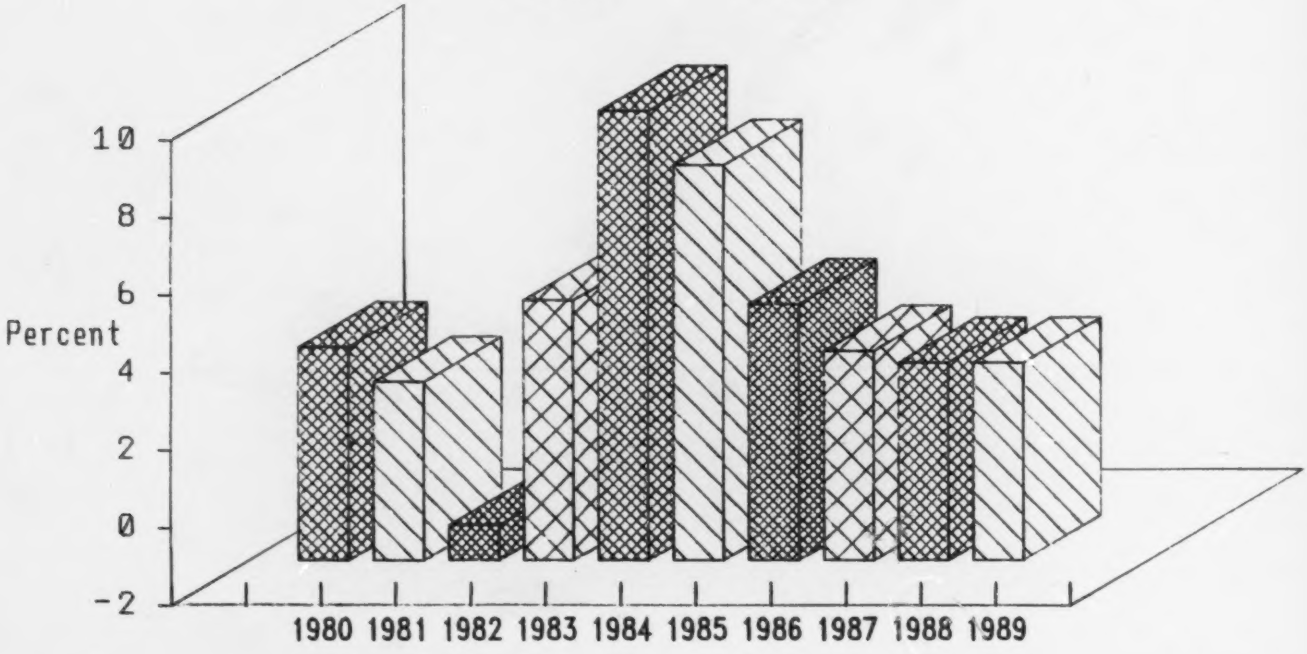
ARIZONA ECONOMIC FORECASTS
(Annual Averages, In Thousands)

	1987	Growth Rate	1988	Growth Rate	1989	Growth Rate
Labor Force	1,614.0	2.7%	1,673.0	3.7%	1,733.3	3.6%
Unemployed	101.0	-7.3	116.5	15.4	125.4	7.6
Unemployment Rate	6.3%	----	7.0%	----	7.2%	---
Total Employment	1,513.0	3.4	1,556.5	2.9	1,607.9	3.3
Total Wage and Salary Employment	1,383.7	3.4	1,426.8	3.1	1,471.4	3.1
Manufacturing	187.2	1.4	190.9	2.0	196.2	2.8
Mining	11.4	3.6	12.0	5.3	12.4	3.3
Construction	102.4	-9.5	93.2	-9.0	93.4	0.2
TCPU*	72.0	9.3	75.2	4.4	77.2	2.7
Trade	339.5	4.3	355.3	4.7	368.0	3.6
FIRE**	94.4	6.2	96.4	2.1	98.8	2.5
Services	343.9	6.2	364.9	6.1	381.2	4.5
Government	232.9	3.5	238.8	2.5	244.2	2.3

* TCPU = Transportation, Communications, and Public Utilities.
** FIRE = Finance, Insurance, and Real Estate.

NOTE: Totals may not add due to rounding.

ARIZONA WAGE AND SALARY EMPLOYMENT GROWTH RATES 1980 - 1989



jobs, followed by the nonmetropolitan counties with about 9,900 and 6,900 by Pima County. Maricopa County should still contribute the largest number of jobs, but the nonmetropolitan counties should surpass the rate of growth of the two metropolitan counties in the next two years. The nonmetropolitan counties are projected to grow by 4.4 percent in 1988, compared to 2.9 percent in Maricopa County and 2.8 percent in Pima County.

The better outlook for the nonmetropolitan counties can be attributed to three factors:

1. The mining industry has incorporated new technologies to extract copper less expensively. As the price of copper rose again, the industry started to gradually increase its employment base.
2. Prices of agricultural commodities are rising.
3. Tourism and manufacturing are becoming the economic base of many nonmetropolitan counties.

Among the nonmetropolitan counties, those having manufacturing and tourism as their base will contribute the most toward higher state growth. Nevertheless, it is important to note that, since Maricopa County's employment base is about two-thirds of the state total, it will have greater influence in determining the outlook for Arizona's economy.

Overall, Arizona should continue to grow at a faster rate than the national average as it has done in the last four years. Unfortunately, the unemployment rate will also move to higher levels than now, and higher than national rates, but should not reach the levels observed in the recession year of 1982.

Jalal Ahmad

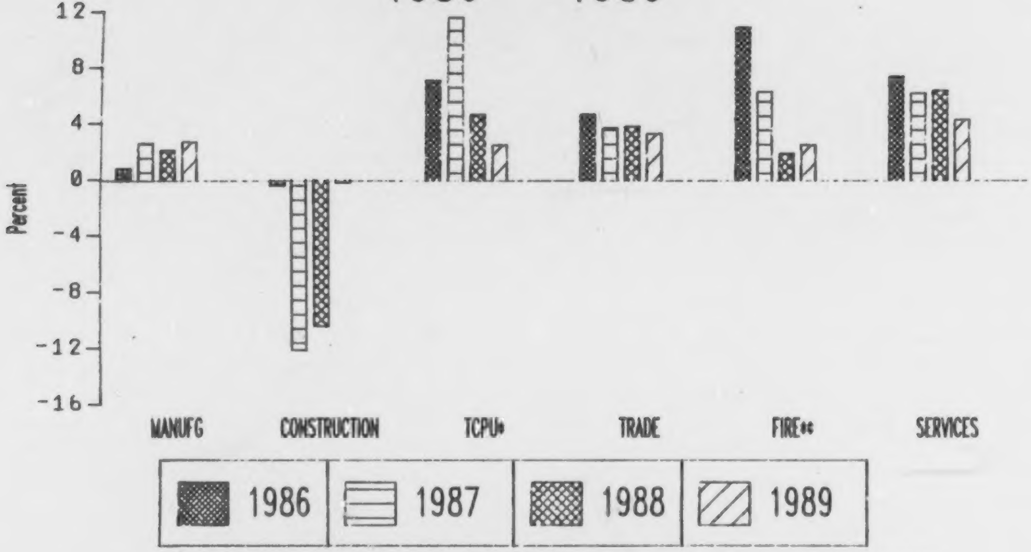
Maricopa County

The economy of the Phoenix metropolitan area reflected that of the state economy in 1987. Labor force and employment grew by 2.9 percent and 3.3 percent, respectively, in 1987. Relatively higher employment growth than labor force growth resulted in a decline in the annual average unemployment rate to 5.2 percent in 1987 from 5.6 percent in 1986. The slower labor force growth was principally due to the decline in total unemployment. As in the state, the decline in unemployment was due either to an increase in discouraged workers leaving the unemployment rolls or job seekers leaving the county for better opportunities elsewhere. It is forecast that the county will realize a modest growth in its labor force over the next two years. In 1988, the labor force is expected to grow by 3.2 percent, followed by 3.5 percent growth in 1989. Continued decline in construction employment and slower growth in manufacturing will also retard employment growth in the near future. Employment by place of residence is forecast to go up by 2.6 percent in 1988 and 3.3 percent in 1989. As employment growth falls short of labor force growth, the number of unemployed should rise, resulting in a higher unemployment rate of 5.7 percent in 1988.

The economic outlook for nonagricultural wage and salary employment continues to be modest. Total wage and salary employment should grow by a rate of 2.9 percent or 26,300 new jobs in 1988. Similar growth is expected in 1989, although 1989's growth will be slightly improved.

In 1987, construction employment fell by 12.1 percent. Of the total statewide decline of 10,700 construction jobs, the Phoenix area took the largest loss of 9,500 or 89 percent. The only explanation for this is that, during the recovery period, the Phoenix metropolitan area achieved the largest gains. The outlook for this industry continues to be weak. Reports show that there is still an overabundance of multifamily dwellings, office buildings, and retail spaces. Unless these additional facilities are absorbed through new demand, construction employment in these sectors

MARICOPA EMPLOYMENT GROWTH RATES IN SELECTED INDUSTRIES
1986 - 1989



* TCPU = TRANSPORTATION, COMMUNICATIONS, AND PUBLIC UTILITIES
** FIRE = FINANCE, INSURANCE, AND REAL ESTATE

should continue to slide. Lower mortgage interest rates may help create some additional demand for single-family housing, but that will be offset by lower personal income growth and weak consumer confidence. Taking all these factors into consideration, this industry should face another year of downturn. Employment is forecast to drop by 7,200 or 10.4 percent in 1988. By 1989, the industry demand and supply conditions will stabilize, resulting in a flat or slightly declining employment level.

A second important reason for the slow growth in wage and salary employment is the anemic growth in manufacturing. There are two important points to be made regarding this industry. First, nearly 90 percent of the firms employ 50 or fewer people. In other words, the industry is composed of a large number of small firms. Second, nearly 80 percent of its total jobs are in durable goods manufacturing, where there are producers of both defense-related products and semiconductor and computer-related products. Recently, producers of defense-related products have been cutting back employment as many of their projects are completed or are nearing completion. In addition, due to the budget cuts in the defense sector, producers will be forced to cut back more jobs in the near future. The losses in the defense sector, however, are expected to be smaller than the gains in semiconductor and computer industries. The growth will depend on the demand for our products nationally as well as in the world market. There are indications that the fall in the value of the dollar is making our products more desirable, but Phoenix producers have not yet responded by increasing employment. It is forecast that these producers will react more positively by adding additional employment as the value of the dollar falls further or remains at its low level. In sum, the industry should grow by a modest rate of 2.1 percent or 2,900 new jobs in 1988, followed by a higher growth of 2.7 percent or 3,700 new jobs in 1989.

The industries that will contribute the greatest number of new jobs are still the services and trade industries. Together, they will add about 23,500 new jobs out of a total 26,300 new jobs in the county.

MARICOPA COUNTY ECONOMIC FORECASTS
(Annual Averages, In Thousands)

	1987	Growth Rate	1988	Growth Rate	1989	Growth Rate
Labor Force	1,001.1	2.9%	1,032.6	3.2%	1,068.7	3.5%
Unemployed	52.1	-4.1	59.0	13.2	63.3	7.3
Unemployment Rate	5.2%	----	5.7%	----	5.9%	----
Total Employment	949.0	3.3	973.6	2.6	1,005.4	3.3
Total Wage and Salary Employment	912.7	3.4	939.0	2.9	967.7	3.1
Manufacturing	135.7	2.6	138.6	2.1	142.3	2.7
Mining	0.6	20.0	0.6	0.0	0.6	0.0
Construction	69.2	-12.1	62.0	-10.4	61.9	-0.2
TCPU*	49.0	11.6	51.3	4.7	52.6	2.5
Trade	230.9	3.7	239.7	3.8	247.7	3.3
FIRE**	74.8	6.3	76.2	1.9	78.1	2.5
Services	231.6	6.2	246.3	6.4	257.0	4.3
Government	120.9	4.0	124.3	2.8	127.5	2.6

* TCPU = Transportation, Communications, and Public Utilities.
** FIRE = Finance, Insurance, and Real Estate.

NOTE: Totals may not add due to rounding.

Growth in services will primarily come from hotels and motels, business services, and health services. Trade will add nearly 8,800 new jobs in 1988, followed by 8,000 in 1989. Within the trade industry, food stores will grow the most, followed by department stores and eating and drinking places.

The growth in finance, insurance, and real estate (FIRE) tapered off in 1987 after three consecutive years of explosive growth. Last year's slow growth of 6.3 percent was principally the result of weak real estate activities and the slowing down of the finance industry. Real estate activities were affected by the new tax law and the decline in construction. The finance industry slowed as most of the merging activities, resulting from deregulation, were completed in 1986 and early 1987. It is forecast that in 1988 both real estate and bank-merging activities will continue to slow, resulting in lower employment opportunities in the next two years.

Transportation, communications, and public utilities (TCPU) experienced a double-digit growth of 11.6 percent in 1987. Most of that growth occurred in the transportation sector. TCPU is forecast to grow by nearly 5.0 percent in 1988. Most of the employment opportunities this year will also be in the transportation sector. Sky Harbor International Airport is expected to continue to expand operations as are the trucking companies. Public utilities are likely to experience little change in employment levels because of the regulatory climate in Arizona.

Government employment will slow in the coming years. All sectors of government--federal, schools, state, and local--should experience slower growth in 1988 in an effort to balance budgets. Because of the budgetary cuts, some services offered by government may have to be reduced, resulting in lower employment. Government employment should increase by a moderate rate of 2.8 percent in 1988 to support population growth.

Jalal Ahmad

The Arizona Labor Force in January

Arizona's unemployment rate for January fell moderately from 6.0 percent to 5.7 percent. Preliminary figures suggest that our labor force growth remains low as surrounding states experience superior job growth. Stronger than expected agricultural activity combined with a less than usual dropoff following the Christmas holidays to push Arizona's unemployment rate below the national average. Unemployment fell to 4.8 percent in Maricopa and Pima counties.

The economy continues to grow moderately, with seasonal influences playing a major role. Wage and salary employment declined by 19,000 in January due in large part to the expected loss of 11,700 employees in the school sector as institutions closed for Christmas break. As well, there was a seasonal loss of 4,000 jobs in retail trade following the end of the Christmas buying season. Particularly in the retail trade sector, those declines were somewhat less than usual reflecting the cautious hiring practices that many companies followed in October and November.

After encouraging growth in November and December, the manufacturing industry lost those gains in January and fell back to October's level. The loss of 700 jobs brings employment down to 187,900 as most areas experienced declines. In the high technology sectors, aerospace lost 100 workers while the machinery group captured an equal number. Reports nationally portray an industry that is beginning to recover, and that had been the case earlier in Arizona. While January's losses are a setback, they may only be temporary.

Falling interest rates have not yet had a significant effect on construction. Employment fell by 2,000 as nearly every county in the state recorded losses. The slide is expected to continue through most of 1988 as a combination of high vacancy rates and a relatively sluggish economy keeps growth down.

Mirroring the cyclical nature of construction, the finance, insurance, and real estate (FIRE) industry suffered the loss of 100 this month. After reaching peak employment levels last June of 95,600, the trend has been downward. The industry has recently experienced exceptional growth as deregulation of the banking industry combined with a strong construction market to push employment in FIRE to higher levels. Now the industry is entering a correction phase where employment growth will be more restrained.

As mentioned earlier, retail trade lost 4,000 jobs as department stores and other retail establishments reduced employment following the Christmas season. This expected cutback was actually somewhat less than usual. After many months of strong growth in 1986 and 1987, retailers took a cautious approach to hiring this Christmas. Inventories were monitored closely and staffs were expanded just enough to match expected traffic loads. Since employers followed a relatively restrained path in hiring employees before the Christmas season began, significant reductions were not necessary after the season ended.

In services, there were two diverging trends. On the positive side, seasonal hirings at local resorts combined with increased tax preparation work to boost employment by 500. But moderating that was the loss of 1,300 jobs in business services as temporary help agencies suffered losses. This is the first significant decline in many months for business services and should be watched closely.

Arizona's labor market remained sluggish in January. While the unemployment rate fell, little else confirms a stronger economy. Weakness in manufacturing and continuing erosion in construction are the state's two greatest areas of vulnerability. The rest of the economy was influenced by seasonal factors that will have a positive influence until April or May. The outlook for 1988 is that it will appear very much like 1987. While there is no recession in the offing, Arizona can expect restrained growth in the months ahead.

Dan Anderson

Arizona Labor Force and Employment

January 1988 (in thousands)

	ARIZONA					MARICOPA COUNTY					PIMA COUNTY				
				Amt Change					Amt Change					Amt Change	
	Jan.* 1988	Dec. 1987	Jan. 1987	Dec. to Jan.	1987 to 1988	Jan.* 1988	Dec. 1987	Jan. 1987	Dec. to Jan.	1987 to 1988	Jan.* 1988	Dec. 1987	Jan. 1987	Dec. to Jan.	1987 to 1988
TOTAL CIVILIAN LABOR FORCE**	1644.3	1652.4	1591.9	-8.1	+52.4	1016.2	1020.7	985.8	-4.5	+30.4	314.8	315.4	303.1	-0.6	+11.7
Total Unemployment	95.2	95.2	108.5	+0.0	-13.3	50.1	50.0	56.8	+0.1	-6.7	15.4	15.2	17.6	+0.2	-2.2
Rate	5.8	5.8	6.8	---	---	4.9	4.9	5.8	---	---	4.9	4.8	5.8	---	---
Rate (Sea. Adj.)***	5.7	6.0	6.7	---	---	4.8	5.1	5.7	---	---	4.8	4.9	5.8	---	---
Total Employment	1549.1	1557.2	1483.4	-8.1	+65.7	966.1	970.7	929.0	-4.6	+37.1	299.4	300.2	285.5	-0.8	+13.9

The Above Labor Force Statistics Should Not Be Used for Economic Assistance Programs

NONAGRICULTURAL WAGE AND SALARY EMPLOYMENT BY PLACE OF WORK

	ARIZONA					MARICOPA COUNTY					PIMA COUNTY				
	Jan.* 1988	Dec. 1987	Jan. 1987	Dec. to Jan.	1987 to 1988	Jan.* 1988	Dec. 1987	Jan. 1987	Dec. to Jan.	1987 to 1988	Jan.* 1988	Dec. 1987	Jan. 1987	Dec. to Jan.	1987 to 1988
TOTAL WAGE AND SALARY	1404.1	1423.1	1353.4	-19.0	+50.7	923.2	936.1	894.5	-12.9	+28.7	248.7	251.8	238.5	-3.1	+10.2
Manufacturing	187.9	188.6	186.5	-0.7	+1.4	136.6	137.3	134.7	-0.7	+1.9	31.0	31.0	30.6	+0.0	+0.4
Durable Goods	145.9	146.6	145.4	-0.7	+0.5	107.1	107.6	106.2	-0.5	+0.9	25.4	25.5	25.4	-0.1	+0.0
Stone, Clay and Glass	7.4	7.6	8.4	-0.2	-1.0	4.8	4.9	5.7	-0.1	-0.9					
Primary and Fabricated Metals	15.8	15.9	16.0	-0.1	-0.2	10.8	10.8	10.7	+0.0	+0.1					
Primary Metals	7.2	7.2	7.4	+0.0	-0.2										
Fabricated Metals	8.6	8.7	8.6	-0.1	+0.0										
Machinery	65.4	65.3	64.3	+0.1	+1.1	52.0	51.9	51.3	+0.1	+0.7					
Other Durable Goods	57.3	57.8	56.7	-0.5	+0.6	39.5	40.0	38.5	-0.5	+1.0					
Aircraft and Missiles	26.8	26.9	27.8	-0.1	-1.0										
Lumber and Wood Products (Except Furniture)	8.5	8.5	8.4	+0.0	+0.1										
All Other Durable Goods	22.0	22.4	20.5	-0.4	+1.5										
Nondurable Goods	42.0	42.0	41.1	+0.0	+0.9	29.5	29.7	28.5	-0.2	+1.0	5.6	5.5	5.2	+0.1	+0.4
Food and Kindred Products	9.1	9.0	9.0	+0.1	+0.1	6.1	6.1	6.1	+0.0	+0.0					
Apparel	4.9	4.8	5.0	+0.1	-0.1	3.5	3.5	3.3	+0.0	+0.2					
Printing and Publishing	16.1	16.2	16.0	-0.1	+0.1	11.4	11.5	11.4	-0.1	+0.0					
All Other Nondurable Goods	11.9	12.0	11.1	-0.1	+0.8	8.5	8.6	7.7	-0.1	+0.8					
Mining and Quarrying	11.7	11.7	11.1	+0.0	+0.6	0.6	0.6	0.6	+0.0	+0.0	1.6	1.6	1.6	+0.0	+0.0
Copper Mining	8.7	8.7	8.2	+0.0	+0.5										
Other Mining and Quarrying	3.0	3.0	2.9	+0.0	+0.1										
Construction	95.9	97.9	102.5	-2.0	-6.6	64.0	65.4	70.7	-1.4	-6.7	18.9	19.2	19.2	-0.3	-0.3
Trans., Communications, and Public Utilities	73.9	75.0	68.5	-1.1	+5.4	50.5	51.4	46.4	-0.9	+4.1	9.8	9.8	9.2	+0.0	+0.6
Transportation	37.4	38.3	33.0	-0.9	+4.4	26.7	27.5	23.4	-0.8	+3.3	4.9	4.9	4.6	+0.0	+0.3
Communications and Public Utilities	36.5	36.7	35.5	-0.2	+1.0	23.8	23.9	23.0	-0.1	+0.8	4.9	4.9	4.6	+0.0	+0.3
Trade	347.8	351.2	335.3	-3.4	+12.5	234.1	236.9	229.2	-2.8	+4.9	57.4	58.1	54.3	-0.7	+3.1
Wholesale Trade	70.5	69.9	66.3	+0.6	+4.2	54.8	54.4	52.4	+0.4	+2.4	8.1	8.1	7.5	+0.0	+0.6
Retail Trade	277.3	281.3	269.0	-4.0	+8.3	179.3	182.5	176.8	-3.2	+2.5	49.3	50.0	46.8	-0.7	+2.5
General Merchandise and Apparel	45.3	48.9	43.3	-3.6	+2.0	29.2	31.7	28.1	-2.5	+1.1	8.0	8.7	7.4	-0.7	+0.6
Food Stores	45.6	45.7	43.4	-0.1	+2.2	29.0	29.5	28.3	-0.5	+0.7	7.7	7.5	7.1	+0.2	+0.6
Automotive and Service Stations	32.6	32.3	31.1	+0.3	+1.5	20.0	19.8	19.2	+0.2	+0.8	5.5	5.5	5.3	+0.0	+0.2
Eating and Drinking Places	97.5	97.4	94.8	+0.1	+2.7	62.5	62.5	61.6	+0.0	+0.9	18.2	18.1	17.6	+0.1	+0.6
Other Retail Trade	56.3	57.0	56.4	-0.7	-0.1	38.6	39.0	39.6	-0.4	-1.0	9.9	10.2	9.4	-0.3	+0.5
Finance, Insurance, and Real Estate	95.0	95.1	91.8	-0.1	+3.2	75.4	75.3	72.6	+0.1	+2.8	12.5	12.6	12.6	-0.1	-0.1
Services and Miscellaneous	353.5	353.0	330.6	+0.5	+22.9	237.5	237.6	222.8	-0.1	+14.7	67.1	66.7	62.5	+0.4	+4.6
Hotels and Other Lodging Places	38.4	37.8	35.0	+0.6	+3.4	22.4	21.4	20.8	+1.0	+1.6	7.0	7.1	6.2	-0.1	+0.8
Business Services	75.9	77.2	70.7	-1.3	+5.2	60.7	61.9	55.9	-1.2	+4.8	10.9	11.0	10.8	-0.1	+0.1
Health Services	88.9	88.7	82.8	+0.2	+6.1	58.3	58.3	54.2	+0.0	+4.1	18.9	18.9	17.5	+0.0	+1.4
Other Services	150.3	149.3	142.1	+1.0	+8.2	96.1	96.0	91.9	+0.1	+4.2	30.3	29.7	28.0	+0.6	+2.3
Government	238.4	250.6	227.1	-12.2	+11.3	124.5	131.6	117.5	-7.1	+7.0	50.4	52.8	48.5	-2.4	+1.9
Federal	42.8	43.3	41.2	-0.5	+1.6										
State and Local	195.6	207.3	185.9	-11.7	+9.7										
School	112.5	124.2	106.0	-11.7	+6.5										

* Preliminary

** Labor force, unemployment, and employment are reported by place of residence.

*** Normal seasonal variations have been eliminated to reflect underlying economic trends.

NOTE Prepared in cooperation with the U.S. Department of Labor, Bureau of Labor Statistics.

--Prepared by Arizona Department of Economic Security, Research Administration. (CPS, 1/88)

Nonmetropolitan Counties
Labor Force and Employment
January 1988

	Apache	Cochise	Coconino	Gila	Graham	Green-lee	La Paz
TOTAL CIVILIAN LABOR FORCE*.	15,000	35,525	40,725	12,550	7,875	3,025	5,100
Total Unemployment	2,400	3,025	3,950	1,700	825	325	450
Rate	16.0%	8.5%	9.7%	13.5%	10.5%	10.7%	8.8%
Rate (Seas. Adj.)**. . . .	15.6%	8.0%	8.6%	12.9%	10.3%	11.3%	10.6%
Total Employment	12,600	32,500	36,775	10,850	7,050	2,700	4,650

THE ABOVE LABOR FORCE STATISTICS SHOULD NOT BE USED
FOR ECONOMIC ASSISTANCE PROGRAMS

TOTAL WAGE AND SALARY. . . .	15,275	25,200	36,375	10,275	4,925	2,875	3,300
Manufacturing.	925	1,200	2,825	1,225	200	50	225
Mining and Quarrying	25	100	150	1,325	0	1,600	50
Construction	975	1,150	1,525	625	200	225	150
Trans., Comm., & Pub. Util..	2,100	1,550	2,275	425	150	50	75
Trade.	1,525	5,550	8,675	2,200	1,325	225	1,075
Fin., Insur., & Real Estate.	325	675	825	275	125	25	100
Services and Miscellaneous .	4,425	4,475	9,250	1,625	850	125	825
Government	4,975	10,500	10,850	2,575	2,075	575	800

	Mohave	Navajo	Pinal	Santa Cruz	Yavapai	Yuma
TOTAL CIVILIAN LABOR FORCE*.	31,200	26,600	38,450	10,100	35,825	51,450
Total Unemployment	2,350	3,450	3,425	825	2,375	4,650
Rate	7.5%	13.0%	8.9%	8.2%	6.6%	9.0%
Rate (Seas. Adj.)**. . . .	7.1%	11.8%	9.0%	9.1%	6.1%	10.9%
Total Employment	28,850	23,150	35,025	9,275	33,450	46,800

THE ABOVE LABOR FORCE STATISTICS SHOULD NOT BE USED
FOR ECONOMIC ASSISTANCE PROGRAMS

TOTAL WAGE AND SALARY. . . .	21,575	20,150	30,650	9,875	23,650	27,825
Manufacturing.	2,925	1,825	3,600	1,225	2,475	1,575
Mining and Quarrying	325	1,225	3,825	0	700	125
Construction	1,625	1,025	1,650	300	2,000	1,525
Trans., Comm., & Pub. Util..	1,225	1,775	1,125	625	850	1,325
Trade.	6,100	3,975	5,650	4,375	6,350	9,175
Fin., Insur., & Real Estate.	1,050	400	850	425	1,075	1,000
Services and Miscellaneous .	4,650	4,925	4,600	1,425	5,200	6,500
Government	3,675	5,000	9,350	1,500	5,000	6,600

*Adjusted to the Current Population Survey (CPS) to reflect place of residence.
**Seasonal adjustment not applicable for economic assistance programs.

NOTE--Series for Yuma and La Paz counties start January 1983. Data are not comparable to any past series.

Prepared in conjunction with the U.S. Department of Labor, Bureau of Labor Statistics.

Arizona Labor Force and Employment for Economic Assistance Programs
January 1988

County	Civilian Labor Force	Employment	Unemployment	Rate
Statewide	1,640,562	1,549,077	91,485	5.6%
Apache	14,899	12,596	2,303	15.5
Cochise	35,405	32,507	2,898	8.2
Coconino	40,570	36,785	3,785	9.3
Gila	12,495	10,850	1,645	13.2
Graham	7,827	7,041	786	10.0
Greenlee	3,018	2,698	320	10.6
La Paz	5,075	4,647	428	8.4
Maricopa	1,014,206	966,086	48,120	4.7
Mohave	31,103	28,839	2,264	7.3
Navajo	26,453	23,147	3,306	12.5
Pima	314,156	299,354	14,802	4.7
Pinal	38,308	35,017	3,291	8.6
Santa Cruz	10,067	9,279	788	7.8
Yavapai	35,717	33,442	2,275	6.4
Yuma	51,262	46,789	4,473	8.7

These figures are the only official BLS labor statistics to be used for revenue sharing purposes. They are not designed to be used as economic indicators. Note: Series for Yuma and La Paz counties start January 1983. Data are not comparable to any past series.

Arizona Unemployment Insurance Activities
December 1987

	December 1987	November 1987	December 1986	% Change From One Year Ago
Claimants Served*	27,727	24,139	32,261	-14.1%
Average Weeks Unemployed**	8.9	INA	9.0	-.3%
Benefits Paid*	$ 11,369,737	$ 8,687,143	$ 12,695,846	-10.4%
Trust Fund Balance	$414,359,593	$423,131,996	$382,822,982	8.2%

*All Programs **UI Only

INA = Information not available

Estimated Hours and Earnings of Production Workers in Selected Industries
Arizona

INDUSTRY	AVERAGE WEEKLY EARNINGS			AVERAGE WEEKLY HOURS			AVERAGE HOURLY EARNINGS		
	JAN.* 1988	DEC. 1987	JAN. 1987	JAN.* 1988	DEC. 1987	JAN. 1987	JAN.* 1988	DEC. 1987	JAN. 1987
FOR THE STATE OF ARIZONA									
Manufacturing	400.54	408.12	400.25	40.5	41.1	40.8	9.89	9.93	9.81
Aircraft & Missiles	INA	568.71	503.88	INA	44.5	40.8	INA	12.78	12.35
Food & Kindred Products . .	352.02	366.16	402.78	39.2	39.8	42.0	8.98	9.20	9.59
Primary Metals	440.14	444.22	471.42	37.3	38.0	38.8	11.80	11.69	12.15
Machinery	386.56	414.93	377.06	40.1	40.6	39.9	9.64	10.22	9.45
Copper Mining	511.29	504.71	484.76	41.3	41.1	39.8	12.38	12.28	12.18
Construction	425.98	429.09	426.24	36.1	36.8	36.0	11.80	11.66	11.84
Utilities	613.60	619.07	618.02	41.6	42.2	43.4	14.75	14.67	14.24
Retail Trade**	247.10	244.78	234.26	32.3	32.9	31.7	7.65	7.44	7.39
Wholesale Trade	394.21	390.85	382.85	38.8	39.6	40.3	10.16	9.87	9.50

Estimated Hours and Earnings of Production Workers in Selected Industries
Maricopa County

INDUSTRY	AVERAGE WEEKLY EARNINGS			AVERAGE WEEKLY HOURS			AVERAGE HOURLY EARNINGS		
	JAN.* 1988	DEC. 1987	JAN. 1987	JAN.* 1988	DEC. 1987	JAN. 1987	JAN.* 1988	DEC. 1987	JAN. 1987
FOR MARICOPA COUNTY									
Manufacturing	434.70	443.52	433.24	41.4	42.0	41.3	10.50	10.56	10.49
Construction	436.57	445.38	430.08	36.2	36.9	35.9	12.06	12.07	11.98
Retail Trade**	265.35	274.46	259.03	32.8	33.8	32.5	8.09	8.12	7.97
Wholesale Trade	397.17	405.82	383.90	38.9	39.4	39.7	10.21	10.30	9.67

Estimated Hours and Earnings of Production Workers in Selected Industries
Pima County

INDUSTRY	AVERAGE WEEKLY EARNINGS			AVERAGE WEEKLY HOURS			AVERAGE HOURLY EARNINGS		
	JAN.* 1988	DEC. 1987	JAN. 1987	JAN.* 1988	DEC. 1987	JAN. 1987	JAN.* 1988	DEC. 1987	JAN. 1987
*****FOR PIMA COUNTY*****									
Manufacturing	363.24	366.70	335.38	39.1	39.6	37.1	9.29	9.26	9.04
Copper Mining	539.75	540.56	462.16	42.5	42.8	39.4	12.70	12.63	11.73
Construction	379.70	376.38	376.94	36.3	36.4	37.1	10.46	10.34	10.16
Utilities	593.83	578.51	550.86	43.0	42.6	41.7	13.81	13.58	13.21

* Preliminary

** Excludes eating and drinking places.

NOTE--These estimates are based on a sample of full and part-time production and related employees whose payroll and hours are reported for the pay period which includes the 12th of the month. Prepared in cooperation with the U.S. Department of Labor, Bureau of Labor Statistics.

--Arizona Department of Economic Security, Research Administration. (1972 SIC, 1/87)

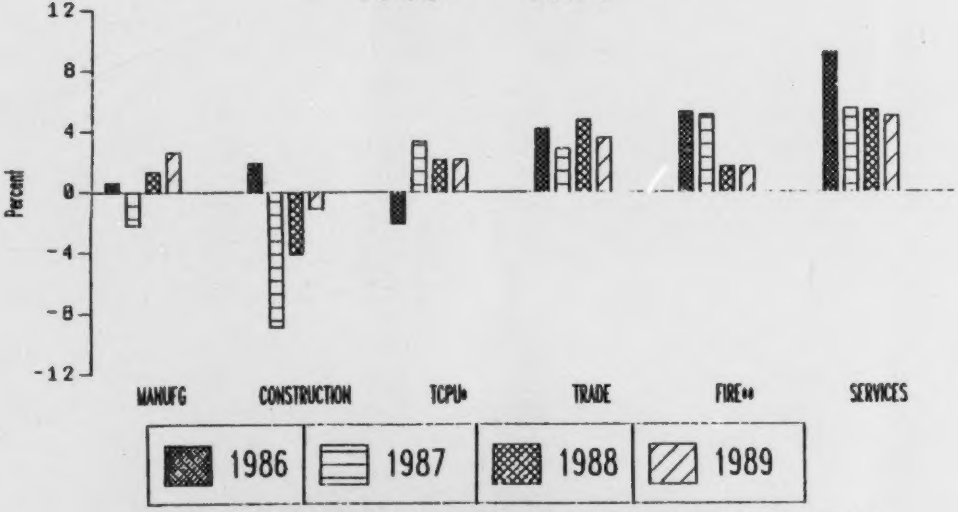
Pima County

With the slowdown in the state's economy, Pima County's wage and salary employment growth fell to 1.8 percent in 1987, down from 3.3 percent in 1986. The slower growth in the Tucson metropolitan area was caused by declines in the goods-producing industries (manufacturing, mining, and construction). According to the benchmarked employment statistics, the service-producing industries (transportation, communications, and public utilities (TCPU); trade; finance, insurance, and real estate (FIRE); and services) grew at a 4.2 percent pace, offsetting the decline in the goods-producing sectors. A similar pattern is expected to emerge in 1988 and 1989 with the population-serving industries outpacing the goods-producing sectors. Pima County total wage and salary employment growth is projected to be slightly stronger over the next two years with gains of 2.8 percent in both 1988 and 1989.

During 1987, the unemployment rate dropped as a result of slow labor force growth and the strong drop in the number of unemployed workers. The drop in the number of unemployed can be attributed to two factors. First, slow job growth and the increased difficulty in finding employment cause workers to become discouraged and stop looking for a job. Such workers are no longer counted among the unemployed. Second, employment in the construction industry dropped by nearly 9.0 percent, a loss of 1,900 jobs, in 1987. Since construction workers, in general, are more mobile than most workers, many left the county for neighboring states with more opportunities. As a result, they were not counted among the unemployed. Despite the drop in 1987, the unemployment rate is expected to climb in the next couple of years as job growth remains slow. The rate is forecast to rise to 5.8 percent in 1988 and 6.0 percent in 1989. Labor force growth is anticipated to increase by 3.8 percent in 1988 and 3.2 percent in 1989, compared to only 1.2 percent in 1987.

Manufacturing employment dropped by 600 (1.9 percent) in 1987, the first decline since the 1975-1976 recession. Durable goods manufacturing declined by 3.8 percent over the year because of drop-offs in both the machinery and aircraft and missiles

PIMA EMPLOYMENT GROWTH RATES IN SELECTED INDUSTRIES 1986 - 1989



* TCPU = TRANSPORTATION, COMMUNICATIONS, AND PUBLIC UTILITIES
** FIRE = FINANCE, INSURANCE, AND REAL ESTATE

PIMA COUNTY ECONOMIC FORECASTS
(Annual Averages, In Thousands)

	1987	Growth Rate	1988	Growth Rate	1989	Growth Rate
Labor Force	306.6	1.2%	318.2	3.8%	328.3	3.2%
Unemployed	15.5	-10.4	18.6	20.0	19.7	5.9
Unemployment Rate	5.1%	----	5.8%	----	6.0%	----
Total Employment	291.1	1.9	299.6	2.9	308.6	3.0
Total Wage and Salary Employment	243.8	1.8	250.7	2.8	257.7	2.8
Manufacturing	31.0	-1.9	31.4	1.3	32.2	2.6
Mining	1.6	-5.9	1.7	6.3	1.7	0.0
Construction	19.5	-8.9	18.7	-4.1	18.5	-1.1
TCPU*	9.5	3.3	9.7	2.1	9.9	2.1
Trade	55.2	2.8	57.8	4.7	59.8	3.5
FIRE**	12.7	5.0	12.9	1.6	13.1	1.6
Services	64.6	5.4	68.0	5.3	71.3	4.9
Government	49.6	2.3	50.5	1.8	51.2	1.4

* TCPU = Transportation, Communications, and Public Utilities.
** FIRE = Finance, Insurance, and Real Estate.

NOTE: Totals may not add due to rounding.

industries. The declines in the defense-related aircraft and missiles sector were anticipated due to the tightening of the federal budget and the completion of some larger defense contracts. Machinery manufacturing employment dropped 700 jobs (6.3 percent) last year. This sector, which is primarily high-tech companies, was expected to grow during 1987 as the drop in the value of the dollar on foreign exchange markets made U.S. goods more attractive. National statistics show that demand for American goods and consequently U.S. industrial production grew over the year. Arizona manufacturers, however, did not see these benefits. It is believed that the machinery industry will feel the effect of the drop in the dollar early in 1988. Given the anticipated declines in defense-related manufacturing and gains in high-tech manufacturing, durable goods manufacturing employment is expected to grow by 0.8 percent in 1988 and by 1.9 percent in 1989.

In 1987, nondurable goods manufacturing grew by 5.8 percent led by the printing and publishing industry, up 7.0 percent. The outlook for nondurables in the future calls for slower but strong growth with gains of 3.6 percent in 1988 and 3.5 percent in 1989. Overall, total manufacturing employment is expected to grow by 1.3 percent in 1988 and 2.6 percent in 1989.

Construction activity saw sharp declines in Pima County during 1987, following the trend in Maricopa County. Large drops occurred in general contracting, down 15.7 percent, and special trades, down 7.3 percent. Heavy construction, however, grew moderately, increasing 4.0 percent, due in part to construction of the Central Arizona Project canal. The outlook for 1988 shows construction declining as many of the factors which led to the decline last year are still in place. Vacancy rates for multifamily dwellings, office buildings, and other commercial real estate remain very high. Therefore, no recovery is foreseen in these areas until late in 1988, after much of the vacant space is absorbed. While long-term interest rates have edged downward, the declines are not large enough to have an appreciable effect on single-family construction. The outlook for 1988 sees construction employment dropping another 4.1 percent, followed by a 1.1 percent drop in 1989.

Mining, like the other goods-producing industries in Pima County, saw employment declines as 100 jobs were lost (5.9 percent). This trend was contrary to the state trend where mining employment grew 3.6 percent in response to favorable market conditions. Pima County is expected to follow the state trend and increase mining employment 6.3 percent in 1988 and maintain its level in 1989.

In 1987, the population-serving industries grew at a combined rate of 4.2 percent. These industries will also be the strength behind the economy in the near future, growing 4.5 percent in 1988 and 3.8 percent in 1989. They will account for 12,100 new jobs over the next two years, or 87 percent of all new jobs. TCPU and FIRE will show modest growth over the forecast period, while trade and services will show stronger growth. Trade is projected to add 2,600 jobs (4.7 percent) in 1988 followed by 2,000 (3.5 percent) in 1989. The forecast for services shows an increase of 3,400 new job opportunities in 1988 and 3,300 in 1989. The service sector that will show the healthiest growth in the near term is the hotel and lodging industry. With the completion of several first-class hotels and resorts over the last three years and the increasing popularity of the Tucson area for business travelers and vacationers, tourism has emerged as a major contributor in the county's economy.

The drop-off in FIRE employment growth, 1.6 percent in 1988 compared to 5 percent in 1987, will be the result of slowdowns in both the financial and real estate industries. The principal factor in the decline of the real estate industry is the downturn in construction activity, which began in mid-year 1986. The slowdown in employment growth in the financial sector has been brought about by the industry tightening up after the rapid expansions brought on by deregulation of the banking industry and the advent of interstate banking.

Government-sector employment grew at a 2.3 percent pace in 1987. Because of budget tightening at both the state and federal levels, government employment is forecast to grow modestly, 1.8 percent in 1988 and 1.4 percent in 1989.

Overall, the outlook for Pima County has improved. Improvements in high-tech manufacturing and mining will help push job growth to 2.8 percent over the next two years, slightly above the 1.8 percent growth recorded in 1987. The unemployment rate will increase over the forecast period as new entrants to the job market surpass the economy's ability to create new jobs. Unemployment rates are projected to be 5.8 percent in 1988 and 6.0 percent in 1989.

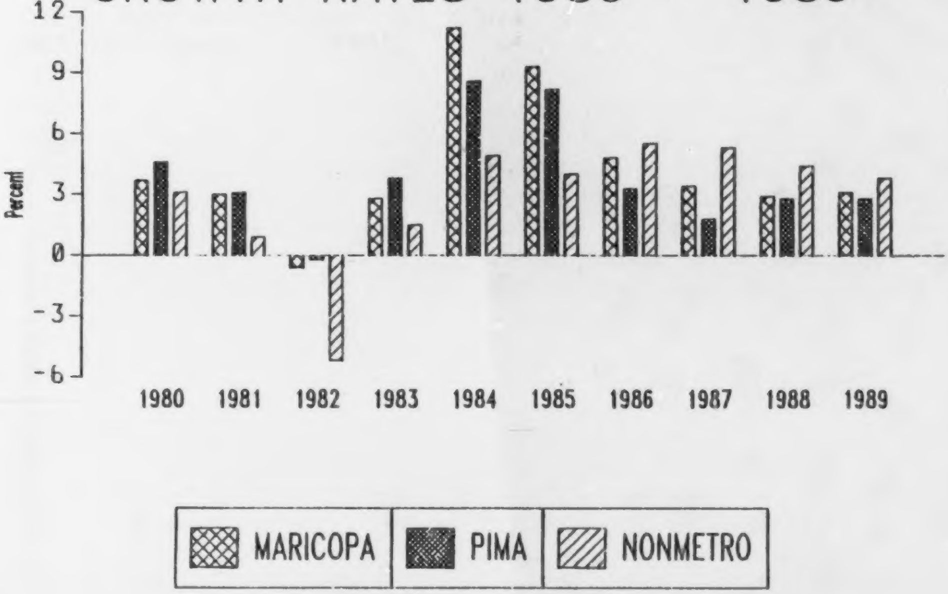
Rosemary Reardon

Nonmetropolitan Counties

In 1987, for the second straight year, the nonmetropolitan counties recorded stronger job growth than the metropolitan areas. Prior to 1986, the last time the rural counties' employment growth outpaced both Maricopa and Pima counties was 1974. According to benchmarked wage and salary employment statistics, job growth in the nonmetropolitan counties advanced 5.3 percent last year (compared to 3.4 percent in Maricopa County and 1.8 percent in Pima County). A similar pattern is anticipated for this year and the following year. A 4.4 percent job growth rate is forecast for the rural counties in 1988, while rates of 2.9 percent and 2.8 percent are projected for Maricopa and Pima. Slightly slower growth, 3.8 percent, is expected for the rural counties in 1989, but this compares favorably to the employment growth of 3.1 percent in Maricopa and 2.8 percent in Pima.

The unemployment rate dropped last year to 10.9 percent as a result of strong job growth. This year, however, the unemploy-

METROPOLITAN VS. NONMETROPOLITAN WAGE AND SALARY EMPLOYMENT GROWTH RATES 1980 - 1989



ment rate will climb. With employment growth slowing in Maricopa and Pima counties, many people who would otherwise look for work in the urban areas will remain in the rural areas. The unemployment rate is projected to climb to 12.1 percent in 1988 and 12.6 percent in 1989.

From 1982 through 1986, the nonmetropolitan counties whose economic base relied more heavily on manufacturing performed better than those relying on mining. But in 1987, there was a reversal to this trend. Last year, manufacturing dropped 200 jobs (1.0 percent) while mining gained 400 new positions. This was the first increase in rural county mining employment since 1981. Gains in mining were spurred on by favorable conditions in the world market with copper prices rising above $1.00 and short-term demand exceeding supply. The increase of 500 is even more remarkable in light of the more capital-intensive extraction processes the industry now uses. Mining employment growth is expected to continue with 500 new employees (5.4 percent) added in 1988 and 300 (3.1 percent) more added in 1989.

The decrease in manufacturing employment in the rural counties was the first drop since the 1982 recession. Contrary to the trend in the metropolitan counties, the drop in manufacturing employment came in the nondurable goods sector. The largest declines were in the apparel and food processing industries. The outlook for nonmetropolitan county manufacturing is improved over the next two years with projected employment levels up 2.0 percent in 1988 succeeded by a 4.3 percent increase in 1989. The sectors showing the strongest growth will be printing and publishing, primary metals, and machinery.

For the construction industry in the metropolitan areas, 1987 was a dismal year as over 11,000 jobs were lost. The nonmetropolitan counties avoided a decline in 1987 as all three construction sectors showed strength. In 1988, however, general contracting, heavy construction, and special trades are anticipated to decline. Much of the decline was, and will be, due to the completion of several large construction projects in 1987 and in the near future. Employment levels are projected to drop 8.8 percent in 1988 and rebound in 1989 to show a 4.8 percent growth rate.

Employment in the nonmetropolitan county trade and services industries grew 7.8 percent in 1987, adding a total of 7,300

NONMETROPOLITAN COUNTIES ECONOMIC FORECASTS
(Annual Averages, In Thousands)

	1987	Growth Rate	1988	Growth Rate	1989	Growth Rate
Labor Force	306.3	3.6%	322.1	5.2%	336.3	4.4%
Unemployed	33.4	-10.7	38.9	16.5	42.4	9.0
Unemployment Rate	10.9%	----	12.1%	----	12.6%	----
Total Employment	272.9	5.7	283.2	3.8	293.9	3.8
Total Wage and Salary Employment	227.2	5.3	237.1	4.4	246.0	3.8
Manufacturing	20.5	-1.0	20.9	2.0	21.8	4.3
Mining	9.2	4.6	9.7	5.4	10.0	3.1
Construction	13.7	5.4	12.5	-8.8	13.1	4.8
TCPU*	13.5	6.3	14.2	5.2	14.7	3.5
Trade	53.4	8.3	57.9	8.4	60.5	4.5
FIRE**	6.9	7.8	7.3	5.8	7.6	4.1
Services	47.7	7.2	50.7	6.3	52.9	4.3
Government	62.4	3.7	64.0	2.6	65.4	2.2

* TCPU = Transportation, Communications, and Public Utilities.
** FIRE = Finance, Insurance, and Real Estate.

NOTE: Totals may not add due to rounding.

jobs. The majority of these new positions were in the tourist-related trade and hotel and lodging industries. The rural counties that benefit the most from strong growth in tourism are in the northern part of the state--Yavapai, Coconino, and Mohave. With the tourism industry remaining healthy through 1989, trade employment is forecast to increase 8.4 percent this year and 4.5 next year. Services job growth is expected to record gains of 6.3 percent and 4.3 percent in 1988 and 1989. The more moderate growth in tourism-related employment in 1989 corresponds to slower growth, in both the national and state economies, which will tend to restrict recreational travel.

In the southern portion of the state, the border counties rely heavily on trade with Mexico. It was believed that the sharp drops in the value of the peso relative to the dollar, which occurred in October 1987, would hurt the economies of these counties. Information to date indicates that the border counties have not been severely impacted by the peso's drop or the instability of the Mexican economy.

The transportation, communications, and public utilities (TCPU) sector and the finance, insurance, and real estate (FIRE) sector both will continue to show strength this year before losing momentum in 1989. TCPU employment is projected to grow by 5.2 percent in 1988 and 3.5 percent in 1989, while FIRE employment is projected to increase 5.8 percent and 4.1 percent in 1988 and 1989.

The government sector, the largest employer in the nonmetropolitan counties, added 2,200 new employees (3.7 percent) last year. Government employment will continue to grow over the next two years but at a slower rate because of budget constraints at both the state and federal levels. Job growth in the government sector is projected to be 2.6 percent in 1988 and 2.2 percent the following year.

Overall, the outlook for the nonmetropolitan counties over the next two years is positive. Nearly 19,000 new jobs will be created during 1988 and 1989.

Rosemary Reardon

LMI Publications—Hot Off the Press

The following new or recently revised publications prepared by the DES Research Administration can be ordered from the address on the back of this newsletter or by calling (602) 255-3871. One copy of each publication will be sent at no charge. Multiple copies are available at a nominal charge to help cover the cost of printing.

The 1988-1989 edition of the Annual Planning Information (API) publication (PAL-327) contains projections for 1988 and 1989 of population, labor force, persons in poverty, and persons with work disabilities. Current data on average weekly wages, veterans, offenders, and Unemployment Insurance recipients are also included.

Many of the tables are presented with breakdowns by age, sex, race, and Hispanic ethnicity. All of this information is arranged for the state as a whole and by either county or Job Training Partnership Act (JTPA) service delivery area. Some data are included for the cities of Phoenix and Tucson.

The API can be used for program planning and evaluation, resource allocation, job development, and vocational counseling. Supplements to the API concerning unskilled workers concentration and high school dropouts are available on request.

Women in Arizona: An Economic Perspective analyzes the demographic and socioeconomic characteristics of women in Arizona. The report includes information on population, educational attainment, family characteristics, labor force, occupational distribution, poverty, and income.

This report, prepared in cooperation with the Vocational Education Division of the Arizona Department of Education, provides information on the role of women in Arizona's labor force for administrators, planners, researchers, counselors, educators, policymakers, and the public who seek information in order to identify social problem areas, develop employment and training policies, and design various affirmative action programs.

New Developments

"New Developments" is featured each month as a service to employers and job seekers. It is a compilation of public announcements of the more significant new construction, grand openings, major hirings and layoffs, and other employer events that have special significance for Arizona labor markets. The announcements are paraphrased and otherwise edited from articles published in newspapers and other periodicals from throughout the state. "New Developments" is limited to space available, and no attempt is made to compile an exhaustive list of all such events that have occurred during the month.

TAX INCENTIVE - The Navajo Tribal Council has established a tax incentive for businesses on the reservation that create new jobs for tribal members. A firm will receive a five-year diminishing tax credit (1 percent the first year, 20 percent reduction of the credit each year) for each job created. This incentive applies only to the tribe's business-activity tax, which is based on a company's gross income.

EDUCATION - The National Science Foundation has ranked the University of Arizona (UofA) in Tucson number 20 in the nation in terms of money spent on scientific research and development in fiscal year 1986. UofA's expenditures in this area were $124.8 million. The top spender was Johns Hopkins University of Baltimore with $440.8 million. UofA had been ranked 22nd in the previous three years.

Construction is in progress on an $11.5 million building expansion at Arizona State University. Located on the former site of the Frankenburg house at University Drive and Forest Avenue in Tempe, the 100,000-square-foot building will house the College of Architecture and Environmental Design.

TRANSPORTATION - USAir will be constructing a $10 million addition to the top of Terminal 2 at Phoenix Sky Harbor International Airport. The airline will be adding seven boarding gates, a $350,000 frequent-flier club, new ticket counters and departure lounges, and a $250,000 outbound-baggage conveyer system. The addition is expected to be completed by November.

MANUFACTURING - Weyerhaeuser Paper Co. is building a $15 to $20 million packaging facility in Yuma. Initially employing about 25 people, the company will gradually increase employment to approximately 80 workers. Most of the employees and plant supervisors will be hired from the Yuma area. Located on a 25-acre site west of Avenue 3E and south of 24th Street, the plant will make corrugated boxes for the fresh produce market.

The National Aeronautics and Space Administration and the U.S. Department of Energy have awarded a $32 million contract to the Garrett Auxiliary Power Division in Phoenix. The five-year contract is to develop a new generation of improved ceramic parts for more-fuel-efficient gas-turbine engines.

HEALTH CARE - The Arizona Medical Clinic Ltd. is under construction in Peoria. Located at 13640 Plaza Del Rio Blvd., the $7.3 million, 71,000-square-foot facility will accommodate 40 physicians and 50 support staff members upon completion in October and provide diagnostic services including a central laboratory and X-ray facilities. The physicians will specialize in family practice, internal medicine, gastroenterology, cardiology, oncology, neurology, dermatology, and general and vascular surgery.

TOURISM - Arizona has been chosen as the 1988 "Destination of the Year" by Travel Check, a European travel-industry magazine. Throughout 1988, the magazine will feature articles about the state and encourage readers to visit Arizona. Travel Check is distributed monthly to 13,850 tour operators, travel agents, and other travel professionals in Belgium, Luxembourg, and the Netherlands.

REAL ESTATE - Design Master Homes has opened two planned golf-course communities at Country Meadows, Northern and 107th avenues in the Valley. Upon completion, the Fairways subdivision will have 426 two- and three-bedroom homes ranging in price from $64,900 to $74,900. The Greens will consist of 242 two-bedroom adult condominiums priced from $49,150 to $56,150.

RETAIL TRADE - ABCO Markets Inc. has opened three more supermarkets in the Valley. One store is at Eighth Avenue and Alma School Road in Mesa, and two Glendale stores are at 43rd Avenue and Union Hills and at 67th Avenue and Cactus Road. Each store employs about 150 people.

DEVELOPMENT - The Kingwood Parke development, a 3,300-acre community in Surprise, is under construction. Expected to be completed in the mid-1990s, it will feature a range of developed sites that will be marketed to home builders. Initial housing prices will range from $49,900 to $105,000. The community, housing as many as 47,000 people, will also feature a 400-acre park with a lake, ponds, jogging and bicycle paths, tennis courts, playing fields, an elementary school, a commercial development, and green belts that will enable residents to reach the park and commercial area without having to walk on a street.

Plans have been approved by the City of Scottsdale for a 260-acre residential and commercial project at the future intersection of Frank Lloyd Wright Boulevard and the Thompson Peak Parkway. The plans call for 2,700 multifamily, townhouse, patio, and single-family homes to be built on 200 acres. The remaining 60 acres will have a retail center, a specialty center, and commercial office space.

UNEMPLOYMENT TAX - Arizona's average unemployment tax rate has decreased to 1.36 percent for 1988 from 1.38 percent in 1987. The tax is used to fund unemployment insurance payments made to unemployed workers. The 1988 rates will range from 0.1 percent to 5.4 percent of employer payrolls, based on experience ratings, with an average payment made by an employer of $95.20 for each employee earning at least $7,000.

Arizona Labor Market Newsletter
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8/10/88 S0465-1

ARIZONA

LABOR MARKET INFORMATION NEWSLETTER

Vol. XII No. 4
April 1988

Unemployment Rate

Seasonally Adjusted
February*

ARIZONA	5.7%
Maricopa Co.	4.7%
Pima Co.	4.6%
United States	5.7%

Consumer Price Index

U.S. - January 1988
Base = 1982-84

Wage Earner/Clerical Worker -	114.5
% Chg. Yr. Ago	4.1
All Urban -	115.7
% Chg. Yr. Ago	4.1

Phoenix - 4th Qtr 1987
Base = 1977

All Urban -	202.7
% Chg. Yr. Ago	4.7

Tucson - 4th Qtr 1987
Base = 1st Qtr 1983

All Urban -	121.7
% Chg. Yr. Ago	4.6

*Preliminary

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We apologize for the lateness of this issue. Please bear with us while we learn our new computer system.

Barbara Keene, Editor
Linda Van Calcar, Word Processor

Arizona Department of Economic Security
— Moving People Toward Self-Sufficiency

Are Wages Keeping Up With the Cost of Living?

Recall the year 1980. Jimmy Carter is President. Gasoline prices are around $1.20 per gallon. We are experiencing double-digit jumps in the Consumer Price Index (CPI), from 1979 through 1981, driving down the buying power of our dollars. The U. S. government has just finished a ten-year census. Copper mining is still going strong in Arizona. The Dow Jones industrial stock average is around 850. The minimum wage is $3.10 per hour. The unemployment rate is 7.1 percent nationally, and 5.9 percent in Maricopa County. Interest rates are 15 to 20 percent.

The year is 1988. Ronald Reagan is President. Gasoline prices are around $.90 per gallon. The CPI has recorded low increases over the last five years, 2 to 4 percent. We are getting ready for our next decennial census. Strong employment growth in copper mining in Arizona is a thing of the past. The Dow Jones industrial stock average ended 1987 a little under 2000. The minimum wage is $3.35 per hour. The national unemployment rate is 6.2 percent, Maricopa County's is 5.5 percent. Interest rates are around 10 percent.

Are we better off in 1988? Not necessarily. What about our standard of living? According to the results of the Small Employer Wage Survey in Maricopa County for 1980 and 1987, some people's wages are not keeping up with CPI increases. This means that these persons had less "real" wage income to spend or save in 1987 than in 1980. This also implies that their standard of living has decreased during this period.

The Consumer Price Index tells us the purchasing power of present-day dollars in relation to a certain period. The Metropolitan Phoenix CPI, published quarterly by Arizona State University, uses the same methodology as that of the U.S. CPI. It is a measure of the average change in price over time for a fixed "market basket" of goods and services. This index indicates the change in the "real" buying power of wages over a period of time. Many union contracts and governmental programs base wage and program eligibility increases on this index.

Wage surveys tell us what wages are being paid in various occupations. The Small Employer Wage Survey covers private businesses with fewer than 100 employees in the industries of construction; wholesale trade; retail trade; manufacturing; transportation, communications, and public utilities; finance, insurance, and real estate; and services. Approximately 90 percent of all companies in Maricopa County employ fewer than 100 people. This survey gathers and reports wages paid to workers in 130 comparable occupations of 1980 and 1987 in the classifications of managerial, professional, technical, service, maintenance and production, clerical, and sales. A summary occupational table aggregates all the reported wage data.

The collection of wage information from about 1,000 employers in Maricopa County has been conducted in August of each year since 1977 in nearly its present format and methodology. The surveyed occupations account for nearly 60 percent of the county's nonagricultural and nongovernmental wage and salary employment. The occupational selection, sample construction, and survey methodology are designed to provide results that are representative of the occupational and industrial structures of small businesses in Maricopa County.

Table 1

THE SUM OF HOURLY WAGES BY INDUSTRY

Industry	1980 Wages	1987 Relative Wages	1987 Actual Wages	Percentage Over (+) or Under (-)
Construction	$354.98	$ 490.58	$ 436.06	-11.1
Manufacturing	346.11	478.32	471.55	-1.4
T.C.P.U.	88.39	122.15	122.14	---
Wholesale Trade	199.85	276.19	267.10	-3.3
Retail Trade	200.59	277.22	273.64	-1.3
F.I.R.E.	148.69	205.49	221.19	+7.6
Services	268.44	370.98	396.40	+6.9
All Industries	900.03	1,243.84	1,214.52	-2.4

T.C.P.U. = Transportation, Communications, and Public Utilities.
F.I.R.E. = Finance, Insurance, and Real Estate.

Table 2

THE SUM OF HOURLY WAGES BY OCCUPATIONAL GROUP

Occupational Group	1980 Wages	1987 Relative Wages	1987 Actual Wages	Percentage Over (+) or Under (-)
Managerial	$175.35	$242.33	$248.36	+2.5
Professional	128.58	177.70	190.72	+7.3
Technical	63.87	88.27	93.33	+5.7
Service	46.53	64.30	60.15	-6.5
Maint. & Production	363.81	502.79	455.94	-9.3
Clerical	91.01	125.78	129.50	+3.0

Table 3

HOURLY WAGES
SERVICE OCCUPATIONAL GROUP

Occupational	1980 Wage	1987 Relative Wage	1987 Actual Wage	Percentage Over (+) or Under (-)
Bartender	$4.10	$5.67	$4.51	-20.5
Chef	6.27	8.67	7.49	-13.6
Cook	3.86	5.33	5.43	+1.9
Cosmetologist	4.29	5.93	8.78	+48.1
Counter Attendant	3.29	4.55	4.15	-8.8
Dining Room Attendant	2.94	4.06	3.44	-15.3
Host/Hostess	3.76	5.20	4.47	-14.0
Housekeeping Cleaner	3.25	4.49	4.78	+6.5
Kitchen Helper	3.25	4.49	3.94	-12.2
Meat Cutter	5.44	7.52	6.60	-12.2
Short Order Cook	3.84	5.31	4.01	-24.5
Waiter/Waitress	2.24	3.10	2.55	-17.7

The time period we are using for this article is 1980 to 1987. During these years, the Metropolitan Phoenix CPI increased 38.2 percent. This means that maintaining the same standard of living in 1987 would require $138.20 for each $100.00 spent in 1980. A wage increase of over 38.2 percent from 1980 to 1987 would give a wage earner enough purchasing power to raise one's standard of living in 1987. Any wage increase less than 38.2 percent for this period would provide less "real" buying power in 1987.

The accompanying tables include an occupation's 1980 average hourly wage rate, the relative hourly wage level necessary to give that occupation the same "real" income in 1987, the 1987 average hourly wage rate, and the percentage difference between the 1987 relative and actual wage rates. The occupations' wage levels are taken from the Small Employer Wage Surveys of those years. Since both the CPI and the wage rates are surveyed numbers, there may be individual deviations.

First, let us look at Maricopa County's wages by industry for these years. One hundred thirty occupations have been categorized in seven industries for 1980 and 1987. Listed in Table 1 are the totals of the 1980 and 1987 average hourly wage levels for these occupations and the percentage difference between the 1987 relative and actual wages.

Table 2 groups the 130 occupations' total average hourly wages by their overall classification. The managerial, professional, technical, and clerical categories of occupations lead in the increase of the purchasing power of wages from 1980 to 1987.

The occupational groups of maintenance and production and service, which together account for over 40 percent of Maricopa County's employment in 1987, lag behind in the increase of buying power of wage dollars from 1980 to 1987. These groups of occupations are characterized by building trade occupations, union association, food service, or minimum wage attachments. First, let us look at the food service occupational sector more closely.

On January 1, 1981, the federal minimum wage was last raised to $3.35 per hour, an 8.1 percent increase from the previous year. From 1980 to 1981, the service occupational category, primarily composed of food service occupations, increased 9.7 percent in total average wage. This group's overall wage rate increased by slightly under 20 percent in the next six years. Table 3 lists the group's occupations and 1980 and 1987 hourly wage levels. Most of these occupations have lost purchasing power of wages from 1980 to 1987.

The above wage statistics correspond with the growth of restaurant sales in Maricopa County during this seven-year period. Total restaurant sales enjoyed an increase of over 80 percent, and per capita sales increased around 45 percent. This sales growth occurred as restaurant labor costs lagged behind those in other industries.

Maricopa County's construction industry, which had strong employment growth from 1980 to 1987, has also showed changing movements in wage levels. Overall, the industry's maintenance and production occupational category consisting primarily of building trade positions,

Table 4

HOURLY WAGES
CONSTRUCTION INDUSTRY
MAINTENANCE AND PRODUCTION OCCUPATIONAL GROUP

Occupation	1980 Wage	1987 Relative Wage	1987 Actual Wage	Percentage Over (+) or Under (-)
Bricklayer	$11.66	$16.11	$14.58	-9.5
Carpenter	9.66	13.35	12.70	-4.9
Cement Mason/Finisher	10.49	14.50	12.12	-16.4
Crane Operator	14.60	20.18	14.52	-28.0
Dry Wall Applicator	10.72	14.82	10.43	-29.6
Electrician	10.05	13.89	9.79	-29.5
General Laborer	6.67	9.22	7.54	-18.2
Industrial Truck Oper.	7.29	10.07	11.94	+18.6
Maintenance Mechanic	7.72	10.67	10.20	-4.4
Oiler	10.49	14.50	13.84	-4.6
Painter	8.54	11.80	9.01	-23.6
Pipefitter (Plumber)	11.18	15.45	11.82	-23.5
Plasterer	11.59	16.02	10.10	-37.0
Roofer	9.73	13.45	9.92	-26.2
Saw Operator	6.44	8.90	10.21	+14.7
Sheet Metal Worker	10.15	14.03	12.53	-10.7
Truck Driver-Heavy	9.89	13.67	12.43	-9.1
Truck Driver-Light	6.56	9.07	9.00	-0.8
Welder	8.50	11.75	8.54	-27.3

Table 5

HOURLY WAGES
RETAIL TRADE AND SERVICES INDUSTRIES
MAINTENANCE AND PRODUCTION OCCUPATIONAL GROUP

Occupation	1980 Wage	1987 Relative Wage	1987 Actual Wage	Percentage Over (+) or Under (-)
Air Conditioning Mechanic	$ 8.18	$11.30	$ 9.29	-17.8
Auto Body Repairer	7.71	10.66	11.68	+9.6
Auto Car Wash Attendant	3.40	4.70	4.30	-8.5
Auto Mechanic	7.74	10.70	10.32	-3.6
Auto Serv. Station Attend.	4.12	5.69	4.56	-19.9
Bus Driver	3.42	4.73	7.62	+61.1
Day-Care Center Worker	3.47	4.80	4.12	-14.2
Dry Cleaner	4.33	5.98	6.71	+12.2
Groundskeeper	4.24	5.86	6.02	+2.7
Industrial Garage Worker	6.24	8.62	7.52	-12.8
Laundry Operator	3.30	4.56	4.34	-4.8
Nursing Assistant	3.53	4.88	4.75	-2.7
Presser (Laundry/Dryclean.)	4.27	5.90	5.26	-10.8
Repairman	5.92	8.18	6.36	-22.2
Sales Route Driver	6.69	9.25	5.82	-37.1
Security Aide/Guard	3.60	4.98	5.17	+3.8

lost greatly in its "real" wage income from 1980 to 1987. This group's total occupations' wage level decreased 16 percent in purchasing power during this period. These occupations in the construction industry's maintenance and production occupational classification and 1980 and 1987 hourly wage levels are in Table 4. Only two of these occupations were ahead in "real" wage gain from 1980 to 1987.

Price increases of new and used homes in Maricopa County lagged behind CPI increases during this 1980-to-1987 period. New and resale median selling prices of single-family homes in Maricopa County increased only around 25 percent from 1981 to 1987, about 13 percent below the metropolitan Phoenix CPI percentage increase. Median prices of new and used townhouse sales in the county rose minimally during this same period, 1.5 and 6.7 percent. This occurred while the total average wage level of the construction industry's maintenance and production occupational category was increasing around 15 percent.

Table 5 gives the maintenance and production occupations found primarily in the retail and services industries, 1980 and 1987 hourly wage levels, and the percentage differences between them. Only five of these occupations gained in purchasing power of wage dollars from 1980 to 1987.

The manufacturing industry's maintenance and production occupational classification fared better in "real" wage income gain than did the construction industry. Manufacturing's overall maintenance and production wage level, however, fell about 6 percent below the CPI increment from 1980 to 1987. Table 6 gives the remaining maintenance and production occupations from the All Industry aggregated wage levels, most of which are found in the manufacturing industry. About one-half of these occupations gained in the buying power of wage dollars from 1980 to 1987.

The occupational classifications of managerial, professional, technical, clerical, and sales have yet to be reported on in this article. As calculated in group totals, all these categories gained in "real" wage income from 1980 to 1987. Most of the occupations in the professional classification recorded average wage rate increases above the rise in the cost of living and, as a group, rose 48.3 percent in total average wage from 1980 to 1987--over 10 percent higher than the CPI increase for the same period. Table 7 gives the professional occupations, 1980 and 1987 hourly wage levels, and the percentage difference.

The technical group of occupations had the second-highest absolute "purchasing power" increment from 1980 to 1987. As a group, the buying power of its total average wage rate was 5.7 percent above the CPI-adjusted wage level for the period from 1980 to 1987. Table 8 gives the occupations in this category.

Most of the managerial occupations recorded gains in "real" income during this period. As a group, the total average wage increase was about 3 percent over the CPI rise. The list of managerial occupations, 1980 and 1987 hourly wage levels, and percentage differences are in Table 9.

The clerical group of occupations had a pattern in "real" wage income increase from 1980 to 1987 similar to that of the managerial category. Table 10 lists the clerical occupations. The remaining occupational group, sales, is in Table 11.

Table 6

HOURLY WAGES
MAINTENANCE AND PRODUCTION OCCUPATIONAL GROUP

Occupation	1980 Wage	1987 Relative Wage	1987 Actual Wage	Percentage Over (+) or Under (-)
Building Maint. Repairer	$ 4.58	$ 6.33	$ 6.84	+8.1
Cabinetmaker	6.38	8.82	8.66	-1.8
Compositor/Typesetter	5.57	7.70	9.18	+19.2
EDP Computer Operator	5.72	7.91	8.79	+11.1
Custodial Worker	3.75	5.18	5.92	+14.3
Drill Press Operator	5.53	7.64	7.77	+1.7
Electronics Assembler	4.28	5.91	6.16	+4.2
Industrial Truck Oper.	5.62	7.77	7.66	-1.4
Inspector	6.64	9.18	9.63	+4.9
Lathe Operator	7.26	10.03	10.66	+6.3
Machinist	7.29	10.07	10.35	+2.8
Maintenance Mechanic	8.28	11.44	9.98	-12.8
Material Handler	4.98	6.88	6.54	-4.9
Millwright	8.64	11.94	10.68	-10.6
Oiler	9.83	13.59	12.48	-8.2
Packager	4.34	6.00	5.54	-7.7
Photoengraver	6.54	9.04	10.01	+10.7
Printing Press Operator	6.90	9.54	8.90	-6.7
Product Assembler	4.63	6.40	6.42	+0.3
Production Assembler	4.91	6.79	6.44	-5.2
Saw Operator	6.46	8.93	7.64	-14.4
Tool and Die Maker	8.69	12.01	12.13	+1.0
Truck Driver-Heavy	8.05	11.13	9.48	-14.8
Truck Driver-Light	5.23	7.23	6.80	-5.9
Warehouse Worker	4.20	5.80	6.74	+16.2
Welder	6.90	9.54	8.37	-12.3

Table 7

HOURLY WAGES
PROFESSIONAL OCCUPATIONAL GROUP

Occupation	1980 Wage	1987 Relative Wage	1987 Actual Wage	Percentage Over (+) or Under (-)
Accountant	$ 8.56	$11.83	$13.21	+11.7
Architect	10.95	15.13	17.13	+13.2
Buyer	7.34	10.14	11.51	+13.5
Civil Engineer	11.45	15.82	15.93	+0.7
Claim Adjuster	8.61	11.90	13.21	+11.0
Claim Examiner	8.80	12.16	10.52	-13.5
Electronic Engineer	10.95	15.13	19.52	+29.0
Licensed Practical Nurse	5.35	7.39	7.73	+4.6
Loan Officer	6.18	8.54	11.76	+37.7
Mechanical Engineer	13.87	19.17	17.23	-10.1
Purchasing Officer	9.11	12.59	12.57	-0.2
Registered Nurse	8.46	11.69	11.00	-5.9
EDP Systems Anaylst	10.45	14.44	18.03	+24.9
Training Specialist	8.50	11.75	11.37	-3.2

Table 8

HOURLY WAGES
TECHNICAL OCCUPATIONAL GROUP

Occupation	1980 Wage	1987 Relative Wage	1987 Actual Wage	Percentage Over (+) or Under (-)
Dental Assistant	$ 4.71	$ 6.51	$ 9.53	+46.4
Drafter (Draftsman)	7.10	9.81	10.65	+8.6
Electronic Technician	6.88	9.51	9.20	-3.3
Estimator	11.65	16.10	14.65	-9.0
Laboratory Tester	7.04	9.73	7.81	-19.7
Medical Lab Technician/ Technologist	6.14	8.49	8.49	---
Physician Assistant	5.13	7.09	11.19	+57.8
EDP Programmer	8.77	12.12	11.88	-2.0
Radiologic Technologist	6.45	8.91	9.93	+11.4

Table 9

HOURLY WAGES
MANAGERIAL OCCUPATIONAL GROUP

Occupation	1980 Wage	1987 Relative Wage	1987 Actual Wage	Percentage Over (+) or Under (-)
Auto Service Manager	$ 7.33	$10.13	$12.35	+21.9
Branch Manager	12.18	16.83	17.42	+3.5
Construction Supervisor	12.44	17.19	15.68	-8.8
Controller	11.87	16.40	16.14	-1.6
Credit Manager	6.33	8.75	11.75	+34.3
Hotel/Motel Manager	9.70	13.41	15.85	+18.2
Machine Shop Supervisor	10.36	14.32	12.87	-10.1
Manager Trainee	4.83	6.68	6.70	+0.3
Office Manager	8.03	11.10	12.25	+10.4
Parts (Dept.) Manager	7.77	10.74	11.45	+6.6
Personnel Analyst/ Officer	11.42	15.78	14.69	-6.9
Plant (General) Manager	11.57	15.99	18.18	+13.7
Production Supervisor	9.21	12.73	12.51	-1.7
Restaurant/Coffee Shop Manager	6.55	9.05	7.66	-15.4
Retail Store Manager	7.35	10.16	9.47	-6.8
Sales Manager	11.10	15.34	15.66	+2.1
Service Manager	8.27	11.43	13.11	+14.7
Warehouse Supervisor	7.05	9.74	9.77	+0.3
Wholesaler (Sales Manager)	11.99	16.57	14.85	-10.4

Table 10

HOURLY WAGES
CLERICAL OCCUPATIONAL GROUP

Occupation	1980 Wage	1987 Relative Wage	1987 Actual Wage	Percentage Over (+) or Under (-)
Accounting Clerk	$4.92	$6.80	$7.21	+6.0
Bookkeeper	5.78	7.99	8.63	+8.0
Cashier	3.70	5.11	4.97	-2.7
Clerk	4.47	6.18	6.03	-2.4
Dispatcher	6.97	9.63	8.87	-7.9
Executive Secretary	7.02	9.70	9.85	+1.5
Hotel/Motel Desk Clerk	3.98	5.50	4.74	-13.8
EDP Keypunch Operator	4.90	6.77	6.08	-10.2
Legal Secretary	5.89	8.14	10.59	+30.1
Medical Secretary	5.49	7.59	7.80	+2.8
MTST Operator	5.80	8.02	7.55	-5.9
Personnel Aide	5.11	7.06	7.64	+8.2
Receptionist	4.21	5.82	6.15	+5.7
Secretary	5.20	7.19	7.57	+5.3
Shipping and Receiving Clerk	5.06	6.99	6.68	-4.4
Stock/Inventory Clerk	4.22	5.83	6.74	+15.6
Switchboard Operator	3.93	5.43	6.00	+10.5
Teller	4.36	6.03	6.40	+6.1

Table 11

HOURLY WAGES
SALES OCCUPATIONAL GROUP

Occupation	1980 Wage	1987 Relative Wage	1987 Actual Wage	Percentage Over (+) or Under (-)
General Salesperson	$ 6.45	$ 8.91	$ 9.02	+1.2
Insurance Sales Agent	15.07	20.83	15.19	-27.1
Parts Counter Person	5.37	7.42	7.65	+3.1
Sales Agent	3.99	5.51	4.66	-15.4

In summation, the only industrial occupational groups that gained in "real" wage income for the seven-year period through 1987 were finance, insurance, and real estate, 7.6 percent, and services, 6.9 percent. With the exception of the construction industry, which lost 11.1 percent in purchasing power of dollars for this period, the other industrial categories remained the same or lost minimally.

Four of the seven occupational classifications--professional, managerial, technical, and clerical--enjoyed "real" wage income gains during this seven-year period. The percentage increases in purchasing power of total wages, highest to lowest, were professional, 7.3; technical, 5.7; clerical, 3.0,; and managerial, 2.5. Two of the largest groups of occupations, maintenance and production and service, suffered the most, dropping 9.3 and 6.5 percents in "real" income during this seven-year period. The remaining occupational category, sales, dropped a large 14.4 percent in purchasing power. Overall, a "typical" employee of a small business in Maricopa County lost 2.4 percent in the purchasing power of wage dollars, excepting tax changes, from 1980 through 1987.

The ramifications of gains or losses in "real" income to these employees are many. For the losers to maintain their standard of living, alternatives include a second job for oneself or a spouse, less savings, or somehow an increase in outside income. For those wage earners on the plus side, the decisions are easier. Work less, save or invest more, or buy and spend more are the options.

As buying power decreases, changes in the economy occur. Competition for fewer "real" spendable dollars will take place. Merchants must become more cost effective. Banks and investment concerns will compete for these scarce "real" monies. The housing market will have to make adjustments. Some businesses will not survive; others will flourish. Groups of people whose income is tied to CPI increases will be able to maintain or possibly increase their standard of living. Others, whose income is from nonwage sources, may enjoy a "better" lifestyle. The mix and number of businesses and services offered have also changed due to these differing "real" income distributions among wage earners. All these changes have occurred, and are still occurring, in Maricopa County's economy.

Glede Kohler

The Arizona Labor Force in February

Arizona's unemployment rate inched up in February to 5.7 percent and is now on par with the national rate. With increases expected in the state's unemployment, it is likely that Arizona's rate will climb above the U.S. rate by mid-year.

Revised statistics for 1987 show that the state's unemployment rate peaked at 6.7 percent in January and declined throughout most of the year. The national rate followed the same trend, dipping below Arizona's rate in April and only rising above the state's in October. The revised data also show that wage and salary employment in Arizona increased by 3.4 percent in 1987. While the growth rate was slightly lower than the 1986 rate of 4.6 percent, it was higher than the 2.3 percent growth rate that the preliminary 1987 statistics suggested.

The February employment statistics resemble the pattern observed through much of 1987. The construction and manufacturing industries were weak, while the service-producing industries continued to give the economy some momentum. A total of 14,900 jobs were added in February, but most of the increase was attributable to seasonal gains in the tourist-related industries and school faculty and staff returning to work after the holiday break.

Construction employment dropped by 1,300 in February as all but four counties registered losses. Since the decline in construction began in July 1986, a total of 22,600 construction jobs have been lost. Continued declines are expected. Also, despite lower mortgage rates, single-family residential construction has not, and is not, expected to rebound.

Manufacturing, which also experienced problems last year, lost jobs in February. Declines in defense-related aircraft and missile manufacturing were anticipated as a result of federal budget tightening. High tech machinery manufacturing remained steady in February after dropping 100 in January. This sector is expected to come out of the doldrums, showing moderate growth in the near term as the industry's recovery filters down to Arizona.

Within the trade and service-related industries, most sectors were expanding in February. Overall, trade employment grew by 1,500 even though department store employment dropped by 800 as post-holiday layoffs continued. Job growth in the services industries was led by seasonal gains in the hotel and lodging sector which added 1,300 positions. Business services more than recovered from its January loss with a gain of 900, stemming from the increase in temporary help workers. The downward trend in finance, insurance, and real estate continued in February as 300 more jobs were lost--a reflection of the dismal conditions in the construction industry.

February produced mixed results for the Arizona economy. The service-producing sectors continued to create jobs and generally out-perform expectations, while the goods-producing manufacturing and construction industries faltered. The outlook suggests more of the same. Construction declines will persist while manufacturing shows some improvement, but most job creation will be spearheaded by service-related business. If job growth remains sluggish, it is likely that the unemployment rate will rise in the near term.

Rosemary Reardon

Arizona Labor Force and Employment

February 1988 (in thousands)

Arizona Labor Force and Employment

February 1988 (in thousands)

	ARIZONA			-- Amt Change --		MARICOPA COUNTY			-- Amt Change --		PIMA COUNTY			-- Amt Change --	
	Feb.* 1988	Jan. 1988	Feb. 1987	Jan. to Feb.	1987 to 1988	Feb.* 1988	Jan. 1988	Feb. 1987	Jan. to Feb.	1987 to 1988	Feb.* 1988	Jan. 1988	Feb. 1987	Jan. to Feb.	1987 to 1988
TOTAL CIVILIAN LABOR FORCE**	1637.1	1639.1	1608.2	-2.0	+28.9	1011.3	1014.1	994.8	-2.8	+16.5	313.9	313.7	306.5	+0.2	+7.4
Total Unemployment	92.6	92.7	105.5	-0.1	-12.9	47.6	48.7	54.9	-1.1	-7.3	14.8	15.1	17.3	-0.3	-2.5
Rate	5.7	5.7	6.6	---	---	4.7	4.8	5.5	---	---	4.7	4.8	5.6	---	---
Rate (Sea. Adj.)***	5.7	5.6	6.5	---	---	4.7	4.7	5.5	---	---	4.6	4.7	5.6	---	---
Total Employment	1544.5	1546.4	1502.7	-1.9	+41.8	963.7	965.4	939.9	-1.7	+23.8	299.1	298.6	289.2	+0.5	+9.9

The Above Labor Force Statistics Should Not Be Used for Economic Assistance Programs

NONAGRICULTURAL WAGE AND SALARY EMPLOYMENT BY PLACE OF WORK

NONAGRICULTURAL WAGE AND SALARY EMPLOYMENT BY PLACE OF WORK

	ARIZONA					MARICOPA COUNTY					PIMA COUNTY				
TOTAL WAGE AND SALARY	1417.8	1402.9	1369.8	+14.9	+48.0	931.6	923.0	903.0	+8.6	+28.6	251.6	248.4	242.5	+3.2	+9.1
Manufacturing	187.2	187.6	186.2	-0.4	+1.0	136.5	136.5	134.9	+0.0	+1.6	30.6	30.9	30.7	-0.3	-0.1
Durable Goods	145.0	145.8	144.9	-0.8	+0.1	106.7	107.1	106.2	-0.4	+0.5	25.1	25.3	25.4	-0.2	-0.3
Stone, Clay and Glass	7.3	7.5	8.3	-0.2	-1.0	4.8	4.9	5.6	-0.1	-0.8					
Primary and Fabricated Metals	15.8	15.9	15.6	-0.1	+0.2	10.8	10.7	10.7	+0.1	+0.1					
Primary Metals	7.3	7.3	7.2	+0.0	+0.1										
Fabricated Metals	8.5	8.6	8.4	-0.1	+0.1										
Machinery	65.2	65.2	64.3	+0.0	+0.9	51.8	51.9	51.4	-0.1	+0.4					
Other Durable Goods	56.7	57.2	56.7	-0.5	+0.0	39.3	39.6	38.5	-0.3	+0.8					
Aircraft and Missiles	26.7	26.9	27.7	-0.2	-1.0										
Lumber and Wood Products (Except Furniture)	8.3	8.5	8.3	-0.2	+0.0										
All Other Durable Goods	21.7	21.8	20.7	-0.1	+1.0										
Nondurable Goods	42.2	41.8	41.3	+0.4	+0.9	29.8	29.4	28.7	+0.4	+1.1	5.5	5.6	5.3	-0.1	+0.2
Food and Kindred Products	9.0	9.1	8.9	-0.1	+0.1	6.1	6.1	6.0	+0.0	+0.1					
Apparel	4.9	4.9	5.1	+0.0	-0.2	3.6	3.6	3.4	+0.0	+0.2					
Printing and Publishing	16.3	16.0	16.0	+0.3	+0.3	11.5	11.3	11.5	+0.2	+0.0					
All Other Nondurable Goods	12.0	11.8	11.3	+0.2	+0.7	8.6	8.4	7.8	+0.2	+0.8					
Mining and Quarrying	11.7	11.7	11.2	+0.0	+0.5	0.6	0.6	0.6	+0.0	+0.0	1.7	1.6	1.6	+0.1	+0.1
Copper Mining	8.7	8.7	8.3	+0.0	+0.4										
Other Mining and Quarrying	3.0	3.0	2.9	+0.0	+0.1										
Construction	94.7	96.0	102.4	-1.3	-7.7	63.3	64.2	70.4	-0.9	-7.1	18.6	18.9	19.2	-0.3	-0.6
Trans., Communications, and Public Utilities	74.3	73.9	69.3	+0.4	+5.0	50.5	50.6	46.7	-0.1	+3.8	9.8	9.7	9.3	+0.1	+0.5
Transportation	37.4	37.3	33.3	+0.1	+4.1	26.7	26.7	23.6	+0.0	+3.1	4.9	4.8	4.7	+0.1	+0.2
Communications and Public Utilities	36.9	36.6	36.0	+0.3	+0.9	23.8	23.9	23.1	-0.1	+0.7	4.9	4.9	4.6	+0.0	+0.3
Trade	347.5	346.0	336.2	+1.5	+11.3	233.8	232.8	229.8	+1.0	+4.0	57.4	57.2	54.4	+0.2	+3.0
Wholesale Trade	70.2	70.1	66.9	+0.1	+3.3	54.3	54.5	52.8	-0.2	+1.5	8.1	8.1	7.6	+0.0	+0.5
Retail Trade	277.3	275.9	269.3	+1.4	+8.0	179.5	178.3	177.0	+1.2	+2.5	49.3	49.1	46.8	+0.2	+2.5
General Merchandise and Apparel	43.6	44.4	41.2	-0.8	+2.4	28.2	28.4	26.8	-0.2	+1.4	7.5	7.9	7.0	-0.4	+0.5
Food Stores	45.9	45.5	43.5	+0.4	+2.4	29.5	29.1	28.3	+0.4	+1.2	7.6	7.6	7.1	+0.0	+0.5
Automotive and Service Stations	32.7	32.6	31.4	+0.1	+1.3	20.0	20.0	19.4	+0.0	+0.6	5.7	5.5	5.3	+0.2	+0.4
Eating and Drinking Places	98.5	97.1	96.9	+1.4	+1.6	63.0	62.2	63.2	+0.8	-0.2	18.5	18.2	17.9	+0.3	+0.6
Other Retail Trade	56.6	56.3	56.3	+0.3	+0.3	38.8	38.6	39.3	+0.2	-0.5	10.0	9.9	9.5	+0.1	+0.5
Finance, Insurance, and Real Estate	94.5	94.8	92.3	-0.3	+2.2	74.9	75.2	73.1	-0.3	+1.8	12.4	12.5	12.7	-0.1	-0.3
Services and Miscellaneous	358.4	354.3	335.9	+4.1	+22.5	241.3	238.3	226.5	+3.0	+14.8	68.2	67.2	63.8	+1.0	+4.4
Hotels and Other Lodging Places	39.8	38.5	36.4	+1.3	+3.4	23.5	22.5	21.8	+1.0	+1.7	7.3	7.0	6.5	+0.3	+0.8
Business Services	77.4	76.5	71.7	+0.9	+5.7	62.2	61.4	56.8	+0.8	+5.4	10.9	10.8	10.9	+0.1	+0.0
Health Services	89.5	89.0	83.3	+0.5	+6.2	58.6	58.4	54.5	+0.2	+4.1	19.1	19.0	17.7	+0.1	+1.4
Other Services	151.7	150.3	144.5	+1.4	+7.2	97.0	96.0	93.4	+1.0	+3.6	30.9	30.4	28.7	+0.5	+2.2
Government	249.5	238.6	236.3	+10.9	+13.2	130.7	124.8	121.0	+5.9	+9.7	52.9	50.4	50.8	+2.5	+2.1
Federal	42.6	42.8	41.6	-0.2	+1.0										
State and Local	206.9	195.8	194.7	+11.1	+12.2										
School	123.1	112.6	114.6	+10.5	+8.5										

* Preliminary

** Labor force, unemployment, and employment are reported by place of residence.

*** Normal seasonal variations have been eliminated to reflect underlying economic trends.

NOTE Prepared in cooperation with the U.S. Department of Labor, Bureau of Labor Statistics.

-- Prepared by Arizona Department of Economic Security, Research Administration (CPS, 1/88)

Nonmetropolitan Counties
Labor Force and Employment
February 1988

	Apache	Cochise	Coconino	Gila	Graham	Greenlee	La Paz
CIVILIAN LABOR FORCE*	14,900	35,425	41,475	12,375	7,750	3,050	5,000
Total Unemployment	2,575	3,000	3,600	1,675	775	350	425
Rate	17.3%	8.5%	8.7%	13.5%	10.0%	11.5%	8.5%
Rate (Seas. Adj.)**	17.2%	8.1%	8.4%	12.5%	9.7%	11.1%	8.1%
Total Employment	12,325	32,425	37,875	10,700	6,975	2,700	4,575

THE ABOVE LABOR FORCE STATISTICS SHOULD NOT BE USED
FOR ECONOMIC ASSISTANCE PROGRAMS

	Apache	Cochise	Coconino	Gila	Graham	Greenlee	La Paz
TOTAL WAGE AND SALARY	15,025	25,325	37,825	10,300	5,025	2,950	3,275
Manufacturing	900	1,225	2,850	1,300	200	75	225
Mining & Quarrying	25	125	150	1,325	0	1,600	50
Construction	950	1,150	1,525	600	200	250	125
T.C.P.U.	1,950	1,550	2,825	400	150	50	75
Trade	1,525	5,550	8,775	2,250	1,325	225	1,075
F.I.R.E.	325	650	825	275	125	25	100
Services & Misc.	4,375	4,475	9,300	1,600	850	125	825
Government	4,975	10,600	11,575	2,550	2,175	600	800

	Mohave	Navajo	Pinal	Santa Cruz	Yavapai	Yuma
CIVILIAN LABOR FORCE*	30,300	26,525	38,050	10,025	35,650	51,300
Total Unemployment	2,100	3,675	3,275	825	2,500	5,350
Rate	6.9%	13.9%	8.6%	8.2%	7.0%	10.4%
Rate (Seas. Adj.)**	6.6%	13.1%	8.6%	10.4%	6.6%	12.0%
Total Employment	28,200	22,850	34,775	9,200	33,150	45,950

THE ABOVE LABOR FORCE STATISTICS SHOULD NOT BE USED
FOR ECONOMIC ASSISTANCE PROGRAMS

	Mohave	Navajo	Pinal	Santa Cruz	Yavapai	Yuma
TOTAL WAGE AND SALARY	21,525	20,100	31,025	9,900	23,800	28,200
Manufacturing	2,875	1,800	3,575	1,150	2,350	1,575
Mining & Quarrying	325	1,200	3,800	0	700	125
Construction	1,625	1,000	1,550	300	2,025	1,450
T.C.P.U.	1,200	1,775	1,150	600	850	1,325
Trade	6,075	3,975	5,675	4,475	6,275	9,000
F.I.R.E.	1,050	400	850	425	1,075	1,025
Services & Misc.	4,675	4,800	4,675	1,425	5,200	6,500
Government	3,700	5,150	9,750	1,525	5,325	7,200

* Adjusted to the Current Population Survey (CPS) to reflect place of residence.

** Seasonal adjustment not applicable for economic assistance programs.

T.C.P.U. = Transportation, Communications, and Public Utilities
F.I.R.E. = Finance, Insurance, and Real Estate

Prepared in conjunction with the U.S. Department of Labor, Bureau of Labor Statistics.

Arizona Labor Force and Employment for Economic Assistance Programs
February 1988

County	Civilian Labor Force	Employment	Unemployment	Rate
Statewide	1,637,055	1,544,463	92,592	5.7%
Apache	14,910	12,337	2,573	17.3
Cochise	35,437	32,428	3,009	8.5
Coconino	41,485	37,891	3,594	8.7
Gila	12,367	10,697	1,670	13.5
Graham	7,753	6,971	782	10.1
Greenlee	3,041	2,700	341	11.2
La Paz	4,989	4,564	425	8.5
Maricopa	1,011,283	963,679	47,604	4.7
Mohave	30,291	28,180	2,111	7.0
Navajo	26,531	22,858	3,673	13.8
Pima	313,936	299,086	14,850	4.7
Pinal	38,048	34,765	3,283	8.6
Santa Cruz	10,031	9,195	836	8.3
Yavapai	35,658	33,165	2,493	7.0
Yuma	51,295	45,947	5,348	10.4

These figures are the only official BLS labor statistics to be used for revenue sharing purposes. They are not designed to be used as economic indicators.

NOTE: Series for Yuma and La Paz counties start January 1983. Data are not comparable to any past series.

Arizona Unemployment Insurance Activities
January 1988

	January 1988	December 1987	January 1987	% Change From One Year Ago
Claimants Served*	30,097	27,727	36,542	-17.6%
Avg. Weeks Unemployed**	8.6	8.9	8.8	-2.4%
Benefits Paid*	$10,756,176	$ 11,369,737	$13,211,767	-18.6%
Trust Fund Balance	$409,083,974	$414,359,593	$377,700,832	8.3%

*All Programs **UI Only

Estimated Hours and Earnings of Production Workers in Selected Industries
Arizona

INDUSTRY	AVERAGE WEEKLY EARNINGS			AVERAGE WEEKLY HOURS			AVERAGE HOURLY EARNINGS		
	Feb.* 1988	Jan. 1988	Feb. 1987	Feb.* 1988	Jan. 1988	Feb. 1987	Feb.* 1988	Jan. 1988	Feb. 1987
Manufacturing	396.01	396.82	406.00	40.7	40.7	40.6	9.73	9.75	10.00
Aircraft & Missiles	INA	INA	526.68	INA	INA	42.0	INA	INA	12.54
Food & Kindred Prod.	367.46	373.60	400.03	39.3	40.0	41.8	9.35	9.34	9.57
Primary Metals	462.22	438.22	473.00	38.2	37.2	38.3	12.10	11.78	12.35
Machinery	389.78	388.65	380.89	40.9	40.4	39.8	9.53	9.62	9.57
Copper Mining	509.64	511.29	488.43	41.3	41.3	40.2	12.34	12.38	12.15
Construction	420.08	426.16	421.86	35.6	36.3	35.6	11.80	11.74	11.85
Utilities	623.33	599.59	653.95	41.5	41.9	45.1	15.02	14.31	14.50
Retail Trade**	243.65	241.16	238.60	32.4	31.9	32.2	7.52	7.56	7.41
Wholesale Trade	381.92	389.61	384.71	38.5	39.0	40.2	9.92	9.99	9.57

Estimated Hours and Earnings of Production Workers in Selected Industries
Maricopa County

INDUSTRY	AVERAGE WEEKLY EARNINGS			AVERAGE WEEKLY HOURS			AVERAGE HOURLY EARNINGS		
	Feb.* 1988	Jan. 1988	Feb. 1987	Feb.* 1988	Jan. 1988	Feb. 1987	Feb.* 1988	Jan. 1988	Feb. 1987
Manufacturing	433.68	434.06	432.41	41.5	41.3	41.3	10.45	10.51	10.47
Construction	432.18	440.32	422.10	35.6	36.3	35.0	12.14	12.13	12.06
Retail Trade**	266.49	264.54	264.04	32.9	32.7	32.8	8.10	8.09	8.05
Wholesale Trade	403.65	406.21	386.50	39.0	39.4	39.6	10.35	10.31	9.76

Estimated Hours and Earnings of Production Workers in Selected Industries
Pima County

INDUSTRY	AVERAGE WEEKLY EARNINGS			AVERAGE WEEKLY HOURS			AVERAGE HOURLY EARNINGS		
	Feb.* 1988	Jan. 1988	Feb. 1987	Feb.* 1988	Jan. 1988	Feb. 1987	Feb.* 1988	Jan. 1988	Feb. 1987
Manufacturing	375.54	374.53	347.97	39.2	39.3	37.7	9.58	9.53	9.23
Copper Mining	539.75	539.75	474.73	42.3	42.5	40.3	12.76	12.70	11.78
Construction	368.19	380.06	372.87	35.2	36.3	36.7	10.46	10.47	10.16
Utilities	579.09	585.50	550.12	42.3	42.8	41.3	13.69	13.68	13.32

*Preliminary.
**Excludes eating and drinking places.

Note: These estimates are based on a sample of full- and part-time production and related employees whose payroll and hours are reported for the pay period which includes the 12th of the month. Prepared in cooperation with the U.S. Department of Labor, Bureau of Labor Statistics.

Update on the Consumer Expenditure Survey

Data from the Consumer Expenditure Survey, conducted by the U.S. Bureau of the Census for the U.S. Bureau of Labor Statistics, are now available for 1985. (See the July 1987 issue of the LMI Newsletter for historical information on this survey and 1984 results.)

Consisting of both Diary and Interview components, the Consumer Expenditure Survey collects a continuous flow of information on the buying habits of American consumers. The Diary survey covers small, frequently purchased items such as food and personal care products, while the Interview survey obtains data on relatively larger items including real property and automobiles.

There are three important factors to consider when interpreting data from the Consumer Expenditure Survey. The first is that these data represent averages. Not all consumer units purchase every item. Thus, an average expenditure for an item may be considerably lower than the actual prices paid by those consumers who purchased the item.

A second point is that expenditure increases or decreases between years do not correspond directly to price changes. Consumers sometimes substitute less expensive goods and services or cut consumption of the more expensive ones.

The third factor is that only direct expenditures are included in

Table 1

AVERAGE ANNUAL EXPENDITURES BY REGION OF RESIDENCE - 1985

Items	All Consumer Units	Northeast	Midwest	South	West*
Total, All Items	$22,217	$21,567	$21,469	$21,927	$24,509
Food	3,394	3,631	3,290	3,224	3,563
Alcoholic Beverages	283	301	275	252	329
Housing	6,687	6,581	6,337	6,367	7,849
Shelter	3,840	3,753	3,508	3,470	5,043
Utilities	1,648	1,723	1,725	1,668	1,417
Furnishings	854	813	802	850	978
Apparel	1,161	1,197	1,096	1,120	1,279
Transportation	4,555	4,007	4,326	4,794	5,093
Vehicles	2,043	1,677	1,928	2,317	2,148
Gasoline and Oil	1,035	871	1,038	1,087	1,128
Other Vehicle Exp.	1,210	1,102	1,157	1,175	1,470
Public Trans.	268	357	203	216	346
Health Care	1,037	875	1,064	1,153	983
Entertainment	1,085	1,024	1,085	979	1,340
Education	304	396	283	244	331
Cash Contributions	805	738	821	873	743
Personal Insurance	278	220	307	322	229
Retirement	1,738	1,667	1,720	1,707	1,898

* Includes Arizona.

Table 2

PERCENT CHANGE IN ANNUAL EXPENDITURES
1984-1985

Items	All Consumer Units	West*
Total, All Items	6.3%	6.6%
Food	3.5	2.2
Alcoholic Beverages	-1.0	-5.5
Housing	6.4	10.7
Shelter	9.9	13.1
Utilities	0.6	5.7
Furnishings	2.0	7.5
Apparel	4.9	10.7
Transportation	6.8	6.5
Vehicles	12.7	9.5
Gasoline and Oil	-2.2	1.8
Other Vehicle Exp.	6.4	9.4
Public Transportation	5.1	-6.0
Health Care	5.7	12.0
Entertainment	11.5	13.0
Education	6.3	12.2
Cash Contributions	14.0	1.1
Personal Insurance	-7.3	-24.9
Retirement	8.8	5.9

* Includes Arizona.

the survey. For example, employer-paid life insurance is excluded because the consumer unit does not directly make the expenditure.

RESULTS FROM THE INTERVIEW SURVEY

Consumer units in the Western part of the United States, including Arizona, spent an average of $24,509 in 1985. That figure was up 6.6 percent from 1984's average of $22,988. U.S. expenditures were up 6.3 percent.

The West continues to spend more than any other region, but the Northeast has the highest expenditures for food and education. In 1984, the Northeast also had spent the most for utilities and apparel, but the West spent the most on apparel and the Midwest on utilities in 1985.

The West also leads the country in purchases of alcoholic beverages, even though the figure went down by 5.5 percent between 1984 and 1985, and in expenditures for apparel, entertainment, and retirement.

Housing continues to be the category that consumes the greatest expenditures in all regions of the nation. The West leads in total housing expenditures and in the components of shelter (growing 13.1 percent) and furnishings. The rate of growth of total housing expenditures in 1985 was 10.7 percent in the West compared to 4.9 percent for all consumer units.

Although total transportation expenditures grew at similar rates in both the West and the United States as a whole, the category components grew at vastly differing rates.

Table 3

AVERAGE WEEKLY EXPENDITURES FOR SELECTED FOODS
1985

Items	All Consumer Units	West*
Food, Total	$59.92	$65.06
Food at Home	38.60	40.56
Cereals	1.71	1.78
Bakery Products	3.74	3.82
Beef	3.72	3.96
Pork	2.35	2.20
Other Meats	1.65	1.58
Poultry	1.60	1.59
Fish and Seafood	1.24	1.31
Eggs	.58	.60
Fresh Milk and Cream	2.52	2.70
Other Dairy Products	2.60	2.92
Fresh Fruits	1.85	2.10
Fresh Vegetables	1.80	2.05
Processed Fruits	1.50	1.49
Processed Vegetables	1.04	.99
Sugar and Other Sweets	1.48	1.57
Fats and Oils	1.12	1.17
Nonalcoholic Beverages	3.60	3.68
Food Away From Home	21.32	24.50

* Includes Arizona.

Household spending for vehicles increased 12.7 percent nationally but only 9.5 percent in the West. While gasoline and oil purchasing actually went down 2.2 percent nationally, it went up 1.8 percent in the West.

The largest change in expenditures in the West occured in the category of personal nonhealth insurance--down 24.9 percent. This change is possibly a reflection of intense competition in the insurance industry. The pattern was similar at the national level, but at a smaller magnitude--down 7.3 percent.

RESULTS FROM THE DIARY SURVEY

According to the 1985 Diary Survey, the average consumer unit spent $59.92 per week on food. Units in the West averaged $65.06. Nationwide, more was spent on bakery products than on any other food item. Nevertheless, the West spent more on beef than on other kinds of food.

MORE INFORMATION AVAILABLE

The data presented here represent only a fraction of what is available from the Consumer Expenditure Survey. For more information, please contact the Office of Prices, U.S. Bureau of Labor Statistics, Washington, D.C. 20212 (202) 272-5060.

Barbara Keene

SOURCE: U.S. Department of Labor, News Release, USDL:87-399, September 24, 1987.

LMI Publications—Hot off the Press

The following new or recently revised publications prepared by the DES Research Administration can be ordered from the address on the back of this newsletter or by calling (602) 255-3871. One copy of each publication will be sent at no charge. Multiple copies are available at a nominal charge to help cover the cost of printing. Other DES offices can order these books directly from DES Supply.

The 1987 Employer Wage Survey provides the low, high, and hourly weighted average wage paid for a variety of occupations by firms employing over 50 people. Fringe-benefit data and occupational definitions are also provided. Separate books are available for Maricopa and Pima counties (PAL-338 and PAL-341), while wage data sheets are available for statewide and balance of state.

The fringe-benefit data and part of the wage data are based on the Joint Governmental Salary and Benefits Survey conducted by the State Personnel Division. Some of the wage data are from a survey done by the Department of Economic Security.

The 1987 Small Employer Wage Survey for Maricopa and Pima counties (PAL-331 and PAL-336) lists the hourly low, high, and average wage paid in various occupations by firms with fewer than 100 employees. The wage information is given for the industrial categories of construction; manufacturing; transportation, communications, and public utilities; wholesale trade; retail trade; finance, insurance, and real estate; and services. Within these industries, the job titles are grouped into the occupational categories of managerial, professional, technical, service, maintenance and production, sales, and clerical. A summary table that aggregates the wage data across industries is also provided.

Stay in School (PAL-127), a booklet aimed primarily at high school students, discusses how staying in school enhances job opportunities and compares unemployment rates of persons with varying levels of education.

Finding a Job in the Want Ads (PAL-072) provides tips for job seekers on the various types of newspaper help-wanted ads and how to respond to them.

Arizona Occupational Profile: Transportation, Communications, and Public Utilities (PAL-444) is one in a series of publications produced from information obtained through the Occupational Employment Statistics (OES) survey. The profile, published every three years, presents employment of significant occupations in the transportation, communications, and public utilities industry. In addition to current estimates, occupational projections for 1989 of the number of job openings due to growth and separations are included for the state and counties.

Summer Jobs for Students (PAL-057) is a pamphlet with information on finding summer jobs. Tips are provided on where to look for jobs, how to handle interviews, finding volunteer work, and laws that protect young workers.

Applying for Government Jobs (PAL-068) contains information on application procedures for local, state, and federal jobs. The names and addresses of government personnel offices are included, as well as a list of hotlines to call for current job openings. A summary of major employment trends in government is also provided.

New Developments

"New Developments" is featured each month as a service to employers and job seekers. It is a compilation of public announcements of the more significant new construction, grand openings, major hirings and layoffs, and other employer events that have special significance for Arizona labor markets. The announcements are paraphrased and otherwise edited from articles published in newspapers and other periodicals from throughout the state. "New Developments" is limited to space available, and no attempt is made to compile an exhaustive list of all such events that have occurred during the month.

CONSTRUCTION - Construction has begun on a $22 million steel-arch bridge at Roosevelt Lake. The project consists of a 1,100-foot bridge to be completed by 1989.

Ground has been broken on Crystal Point, an 18-story residential tower on Osborn Road west of 12th Street in Phoenix. The 63 units will start at about 2,000 square feet and $325,000. The $30 million high-rise condominium is scheduled for completion in 1989.

Par Construction Co. has broken ground on two apartment complexes. The Harbor Vista project will include 244 units, averaging 960 square feet, at 38th Street and Chandler Boulevard in Lakewood. Sunset Cove will consist of 256 units, averaging 1,200 square feet, at the Islands in Gilbert.

Intermark Interests Inc. of San Francisco is planning to build an apartment complex on 24.75 acres at 48th Street and the Wakial Loop in Ahwatukee. Both the first phase of 190 units and the second phase of 400 units are expected to be started this year.

UDC Homes will be building 290 homes on 214 acres at 24th Street and Chandler Boulevard in The Foothills, south of South Mountain. The houses will be priced from $150,000 to $250,000. Construction on two model homes has already begun.

Ground has been broken by Hayden & Thomas Scottsdale Apartment Limited Partnership on a $17 million, 316-unit apartment complex at 2700 North Hayden in Scottsdale. The Mediterranean-styled complex, featuring one-, two-, and three-bedroom apartments, should be completed in the fall of 1988.

Construction has begun on a $7 million medical office building on five acres north of 67th Avenue and Union Hills Drive in Glendale. The 60,000-square-foot building is scheduled to be completed at the end of the year.

Ground soon will be broken for Camelback Fountains, a $29 million, mixed-use project at the northwest corner of Camelback Road and 32nd Street in Phoenix. Phase one of the project will include a three-story, 64,000-square-foot building and a 50-unit condominium development. The second phase will consist of an 80,000-square-foot building.

COMMUNICATIONS - The headquarters of the new General Business Market Unit of U S West Inc. is being established in the Phoenix area. About 100 people will be employed, mostly current senior management staff who are being transferred to Arizona. The new unit is designed to serve small business.

ARIZONA BUSINESSES - *Forbes* magazine has ranked two firms in Phoenix among the 25 most profitable companies in the United States. Western Savings & Loan

Association, with a 45.1 percent return on equity over the past five years, was ranked 14th. American Continental Corp. was 22nd with a 37.7 percent return. The most profitable company in the nation was Reebok International of Canton, Massachusetts.

Phoenix is fourth and Tucson 12th on Inc. magazine's ranking of America's best cities for business growth. Number one in the country is Austin, Texas. The magazine based the rankings on the number of new businesses, the percentage growth in private employment, and the percentage of young companies experiencing high growth over a four-year period ending in 1987.

MANUFACTURING - McCulloch Corp. has announced plans to build a plant in Tucson that will employ 500 workers by the end of the year and 800 within five years. The company will be moving both its corporate headquarters from Los Angeles and its El Paso distribution center to Tucson. Some management employees will be transferred from Los Angeles and Lake Havasu City.

Construction has already begun on 220,000 square feet of factory and office space at the northwest corner of South Kolb and East Valencia roads. McCulloch makes gas-powered chain saws and garden equipment.

The Gas Turbine Fuel Systems Division of the Parker Hannifin Aerospace Group has purchased six acres in the Glen-Harbor Air Business Park in Glendale. The company plans to build a 38,000-square-foot facility for overhauling jet-engine fuel nozzles, replacing a smaller plant in Goodyear. Construction on the new facility, which will employ from 75 to 100 people, will begin in May or June.

Dela Tek has closed its ordnance-manufacturing plant on the Gila River Indian Reservation. Six of the 68 workers were transferred to Clark Lake, South Dakota. The rest lost their jobs.

Sola Ophthalmics will be closing its contact-lens manufacturing plant in Phoenix because the company is consolidating operations with Barnes-Hind Inc. facilities in California. The action will result in a loss of 850 jobs in Phoenix within the 12-month period that began in February. As positions at the California plants become available, Phoenix employees will have a chance to apply for them. Those who do not relocate will receive assistance in finding other jobs.

About 80 employees have been laid off by Alcatel Information Systems at its Tempe facility. The company, which is involved in intelligent work stations and computer peripherals, restructured because of market weakness.

Hypercom Pty. Ltd. of Australia has established its U.S. headquarters in Phoenix. The supplier of high-speed, point-of-sale transaction terminals is also planning to build a manufacturing plant, employing about 30 people, before the end of the year.

The Boeing Co. has awarded a pair of contracts worth more than $1.6 million to Uniynamics/Phoenix Inc. of Goodyear. The contracts are for full-scale development of two devices for the Short Range Attack Missile II (SRAM II), a strategic, nuclear air-to-surface weapon designed for launching from bombers.

Hughes Aircraft Co. has cut its Tucson work force by 130 jobs in an attempt to remain competitive in the industry. According to a company press release, defense budget constraints and second-source contracting have caused a reduction in the firm's missile production.

FINANCE - The continued softness in commercial real estate lending has led Southwest Savings and Loan Association to cut 65 jobs statewide. The jobs were lost in Pima and Maricopa counties.

DEVELOPMENT - A 940-acre, master-planned community will be built in Buckeye, adjacent to the Buckeye Town/County Government Complex. The mixed-use development will consist of 126 acres of industrial park, 44 acres of commercial retail space, 113 acres of research and development park, and 3,077 single- and multi-family housing units.

Construction will begin this summer on Boulder Mountain Highlands, a master-planned community to be located in the Desert Uplands region, 10.4 miles from Saguaro Lake. The 324-acre project will include homes, condominiums, commercial buildings, and an elementary school.

The Phoenix City Council has approved a $3.4 million redevelopment project in the Roosevelt Historic District. The project will restore seven turn-of-the-century homes and redevelop the area between Second and Fourth avenues and Roosevelt and McKinley streets.

RETAIL TRADE - Albertson's Inc. is planning to open six food and drug stores in the Phoenix area in late 1989 and 15 stores by 1991. The chain is based in Boise, Idaho.

A.J. Bayless Markets Inc. is planning to close from nine to 15 grocery stores, including two A.J.'s Fine Foods stores which had only recently opened, and sell five stores. The company intends to keep operating 29 Bayless stores and one A.J.'s store at least through the end of the year with the help of a court-approved financing arrangement.

Impact Resources has found that 46.2 percent of Phoenix consumers buy products from catalogs or by mail order, and 14 percent buy from television shopping shows. The survey of more than 8,000 Phoenix consumers also found that 60.8 percent shop at convenience stores.

Smith's Management Corp. of Utah will be opening nine Smith's Food King grocery stores in the Valley by 1990. The 80,000-square-foot superstores together will employ about 3,500 people. Construction will begin in January 1989 on the first store at 107th and Grand avenues in Sun City.

The Price Co. will be opening a new Price Club store in Tucson. Located near the northwest corner of West Orange Grove and North Thornydale roads, the store will employ 150 to 200 workers when completed late this year.

Price Savers Wholesale Warehouse of Salt Lake City will build at least four membership stores in Arizona in 1988 and 1989. The first store, scheduled to open this summer, will be at Bell Road and Black Canyon Freeway in Phoenix. The second store will be in Gilbert. Each store will employ about 100 people.

Reay's Ranch Market has opened at 40th Street and Camelback Road in Phoenix. The natural food supermarket, employing 60 to 70 workers, features hormone- and antibiotic-free meats and poultry and organic produce.

Retail Services Inc. of New York City is planning to open at least four Dress to the Nines clothing stores in Phoenix, Mesa, and Gilbert this year. The stores will average about 22 employees each.

Arizona Labor Market Newsletter
LABOR MARKET INFORMATION PUBLICATIONS
Site Code 733A
P.O. Box 6123
Phoenix, Arizona 85005

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7/10/88 S0465-1 A

ARIZONA LABOR MARKET INFORMATION NEWSLETTER

Vol. XII No. 5
May 1988

Unemployment Rate

Seasonally Adjusted
March*

ARIZONA	5.6%
Maricopa County	4.6%
Pima County	4.6%
UNITED STATES	5.6%

Consumer Price Index

U.S. - February 1988
Base = 1982-84

Wage Earner/Clerical Worker - 114.7
% Chg. Year Ago 3.8

All Urban - 116.0
% Chg. Year Ago 3.9

Phoenix - 4th Qtr 1987
Base = 1977

All Urban - 202.7
% Chg. Year Ago 4.7

Tucson - 4th Qtr 1987
Base = 1st Qtr 1983

All Urban - 121.7
% Chg. Yr. Ago 4.6

*Preliminary

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Arizona Department of Economic Security
— Moving People Toward Self-Sufficiency

The Shift to a Service Economy

Much discussion and concern has been focused on the changing industrial structure of the U.S. economy. While the U.S. economy has been a service economy for many years, the increasing shift from goods production to services has raised fears of economic stagnation and inequality. Much of the current discussion has concentrated on the potential negative consequences of the continuing shift to services, with many implying that the growth in the service-producing industries has come at the expense of the goods-producing industries and that the growth in the service-producing industries is creating a bipolar wage structure. By comparing and contrasting the changing U.S. and Arizona industrial structures, much can be discovered concerning the possible consequences of such changes on Arizona's economy, because Arizona is following the same economic development path.

In analyzing changes in the industrial composition, it is important to use a time frame which is long enough to avoid the influence of the business cycle on the results but also short enough to have consistent data series. The period from 1970 extending through 1987 was used for this analysis because it meets these criteria. Also, for the purpose of this analysis, goods-producing industries refer to manufacturing, mining, and construction; while service-producing industries refer to transportation, communications, and public utilities (TCPU); trade; finance, insurance, and real estate (FIRE); services; and government.

THE NATIONAL INDUSTRIAL STRUCTURE

Nationally, manufacturing's share of employment has declined from 27.3 percent in 1970 to 18.7 percent in 1987. In 1970, the manufacturing industry was the largest source of employment in the country; today, it ranks third behind the services and trade sectors. The decline occurred mostly in the durable goods industries, especially those facing stiff foreign competition. The steel and automobile industries are examples. This tough foreign competition came from countries with more modern and efficient technologies and was exacerbated by the high value of the dollar relative to other currencies for most of the period from 1970 through 1986. Many nondurable manufacturing industries like textiles and clothing have also suffered from foreign competition.

Manufacturing's employment level has also dropped off. In 1987, manufacturing employment totaled 19.1 million, 1.6 percent below the 1970 level of 19.4 million. During the 1970s and 1980s, manufacturing employment has seen ups and downs, peaking in 1979 at 21 million and reaching a trough at 18.4 million after the 1981-82 recession. Thus far in the 1980s, manufacturing employment is, on average, lower than in the 1970s. Some analysts believe this downward trend in manufacturing could lead to economic stagnation in the future.

On the other hand, while the shares of the other two goods-producing industries, mining and construction, fell over the 1970-1987 period, both industries saw increases in employment. Mining employment in 1987 was up 119,000 (1.9 percent) over the 1970 level but has decreased from its 1979 peak. Construction employment expanded by over 1.4 million since 1970, but its share of employment decreased slightly from 5.1 to 4.9 percent. The employment gains in these industries more than offset the losses in manufacturing, meaning overall goods-producing employment has gained 1.3 million jobs since 1970, but the share of goods-producing employment has plunged from 33.3 percent to 24.4 percent.

The 1.3 million gain in goods-producing employment is trivial compared to the 29.9 million increase in service-related employment. Since 1970, the service-producing sectors' share of employment increased from 66.7 percent to 75.6 percent in 1987.

The shares of government and TCPU employment dropped somewhat, but their absolute levels have increased over time. Sectors exhibiting large increases in shares over time were trade and services. Virtually all of the increase in the trade share stemmed from gains in retail trade employment as opposed to wholesale trade. Within the services industry, all sectors showed healthy gains, but growth in business- and health-related services easily surpassed the other sectors. FIRE, the remaining service-related industry, increased its share to 6.5 percent compared to its 5.1 percent share in 1970.

The U.S. economy has been considered a service economy for nearly 40 years. Forty years ago, agriculture and mining were the foundations of Arizona's economy. Since then, the state has followed the same development path as the nation. In fact, Arizona now has a larger percent of employees in the service-producing industries than the nation. While there are similarities between the changes in the nation's and Arizona's industrial structures, some differences are apparent.

GOODS-PRODUCING INDUSTRIES

Since 1970, the state's manufacturing employment share has declined slightly; however, manufacturing employment has more than doubled--growing from 91,200 in 1970 to 187,500 in 1987. This shows that, while it may have declined relative to other industries, manufacturing employment continues to grow in Arizona.

The state's manufacturing strength comes from its large high-tech base, since approximately half of Arizona's manufacturing jobs are in the high-tech industries. These manufacturing industries include aerospace, electronic components, and computers. Although they have been struggling recently, these industries overall have been among the fastest growing in the goods-producing sectors.

Construction, the second largest of the three goods-producing industries, has increased its share of employment from 1970 despite a strong downturn in 1987. Influenced by Arizona's rapid population growth in the 1970s and 1980s, construction employment has nearly tripled.

Mining, which rounds out the goods-producing industries, was Arizona's only declining industry. Today, it is at half the level it was in 1970 and accounts for less than 1 percent of total employment. The copper mining industry has been particularly hard hit by foreign competition, and, while currently experiencing a modest recovery, it is not expected to gain back any of its employment share.

Overall, the goods-producing industries' share of employment has declined to 21.8 percent, down from 27.2 percent in 1970. This coincides with the national trend, but Arizona has experienced much greater growth in absolute terms. During the last 17 years, employment in the state's goods-producing industries increased by 102.2 percent, while the nation's grew only 5.5 percent. Much of Arizona's expansion can be attributed to population growth. The state's population grew 83 percent during the last 17 years, while the nation's population grew 20 percent.

SERVICE-PRODUCING INDUSTRIES

The service-producing industries in Arizona have grown rapidly since

UNITED STATES AND ARIZONA
WAGE AND SALARY EMPLOYMENT SHARES

	United States		Arizona	
	1970	1987	1970	1987
Manufacturing	27.3%	18.7%	16.7%	13.5%
Mining	0.9	0.7	3.8	0.8
Construction	5.1	4.9	6.8	7.4
TCPU*	6.4	5.3	5.5	5.2
Trade	21.2	23.6	23.2	24.5
FIRE**	5.1	6.5	5.6	6.8
Services	16.3	23.6	16.7	24.9
Government	17.7	16.7	21.8	16.8

* TCPU = Transportation, communications, and public utilities.
** FIRE = Finance, insurance, and real estate.

Note: Shares may not add to 100 percent because of rounding.

1970 when they accounted for 72.8 percent of total wage and salary employment. After adding over 684,00 new jobs, the share of service-producing jobs totaled 78.2 percent in 1987. In 1970, the trade sector was the largest employer of all industries. Presently, the services industry provides the most jobs with trade following behind. In 1987, services captured a 24.9 percent share of employment, slightly larger than trade's 24.5 percent share. Business- and health-related services led growth in the services sector, while growth in the trade sector was equally supported by both the wholesale and retail sectors.

Government has dropped from the second largest employer in the state to the third largest over the past 17 years. Last year, over 230,000 workers, nearly 17 percent of those employed, worked for the government. Reflecting the national trend, Arizona's government employment was fueled by gains at the state, local, and school levels, rather than at the federal. Despite gains in the absolute level of employment, the government sector is the one service-related industry which has experienced a major decline in its employment share since 1970.

The remaining service-producing industries maintained their respective employment ranks. FIRE retained its rank as the sixth largest employer, but its share increased from 5.6 percent in 1970 to 6.8 percent in 1987. The real estate industry grew at a slightly faster clip than the finance industry. Both industries together realized a gain of 64,000 employees since 1970. TCPU's share of employment remained fairly stable from 1970 through 1987, with a 5.5 percent share in 1970 and a 5.2 percent share in 1987. In absolute terms, however, TCPU employment more than doubled. Transportation industry growth outpaced growth in communications and public utilities, primarily because of the emergence of the metropolitan Phoenix area as a major regional transportation hub. The growth of public utilities is closely tied to the growth of the population but has been adversely affected by downturns in the business cycle.

ARIZONA'S INDUSTRIAL SHIFT

During the last 17 years, the shifts in Arizona's industrial structure have almost been a mirror image of the changes which occurred nationally. The service-producing industries' share of employment increased appreciably as the share of goods-producing employment plunged.

A "positive" note for Arizona was the strong growth in the level of manufacturing employment which contrasts with the decline nationally. This alleviates fears that Arizona's economy might be facing deindustrialization, or loss of its industrial base, but the national manufacturing employment decline does lead some to argue that the United States is suffering from deindustrialization.

On the service-producing side of the economy, Arizona's growth paralleled the nation's as health- and business-related services employment surged. Both nationally and in Arizona, employment levels in all service-producing industries have grown vigorously.

Within the state, the metropolitan and rural areas are following the same pattern of shifting industrial shares. However, there are major differences in the industrial composition of the metropolitan and nonmetropolitan counties. Since 1970, the shares of employment by industry in the rural counties have not changed markedly. Government was the largest employer in 1970 and currently maintains that position, accounting for over one-fourth of all nonmetropolitan jobs. The trade industry is the second largest employer followed by the services industry, which has sustained the strongest growth of all industries over the previous 17 years.

Except for mining, employment shares or growth did not vary greatly in the remaining industries within the nonmetropolitan counties. Since 1970, mining has dropped by one-third and has fallen from its status as the fourth largest employer with nearly 14,000 employees and now has just over 9,000 employees.

REASONS FOR THE SHIFT

That the shift to services is occurring at all levels of the economy and that the growth in services is taking place across the diverse spectrum of service industries show why there is no single causal explanation for the growth in service-producing industries relative to goods-producing industries. One way to examine the growth of the service-producing industries is to investigate the different industries classified by market and demand types to determine the factors influencing growth.

One group of service industries are those directly dependent upon the consumption patterns of individual consumers. Among these industries are retail trade, which includes eating and drinking establishments, food stores, and department stores; the hotel and lodging industry; as well as health, personal, and amusement services.

Since 1970 (and earlier), there have been major changes in consumption trends. Reasons for these changes are interrelated. First, rising incomes and affluence have altered consumption patterns in favor of services and goods that were once considered luxuries. Since 1970, Arizona per capita disposable income has increased nearly 30 percent, after adjusting for inflation. Second, the growth of two-income households limits the amount of time for individuals to do household tasks. Many families and individuals have found their leisure time to be more valuable than the expense of those services. The growth of two-income families corresponds to the large increase in the labor force participation rate of women. In 1970, the labor force participation rate of women was 43.3. Today, it is 56.7 and still increasing. With the growth in income and the number of two-income and single-parent households, there has been a boom in the variety and number of goods and services demanded by, and consequently supplied to, consumers.

The growth in eating and drinking establishments is a good example of the effect of rising incomes and changing tastes on consumption patterns. Since 1970, employment in this sector has increased nearly fourfold, and its share of total employment has also increased. This trend is projected to continue both nationally and for Arizona.

Health services is another sector which has been profoundly influenced by changes in consumer preferences. With the escalating cost of medical care, consumers have demanded and received lower cost and more convenient care through health maintenance organizations and outpatient facilities. Some of the recent growth in health services is the result of the aging of the population; that is, as the general population grows older, it requires more medical care. Other consumer services which have enjoyed rapid growth and gains in employment share from the increased wealth and changing consumer attitudes are personal services and amusement services.

While the causes of the spectacular growth of consumer services can be generalized to cover all sectors, it is apparent that each industry has been influenced by factors unique to itself. Only by closely examining each of these industries can all the factors spurring the growth in consumer services be uncovered.

Unlike consumer services, business service companies are directly dependent upon other businesses as primary clients rather than on individual consumers. The business services industry is made up of seven major components: advertising; consumer credit reporting and collection agencies; mailing, reproduction, and stenographic services; services to buildings, including cleaning and maintenance services; personnel supply services, which includes temporary help supply companies and employment agencies; computer and data processing services; and miscellaneous business services, which is comprised of research and development, management and consulting, and security services.

With employment in business services increasing its employment level from 12,000 in 1970 to over 75,000 in 1987, growth in this sector outpaced all others. The growth of the individual industries varied widely, but computer and data processing services and personnel supply services have been the fastest growing, particularly in recent years. These industries supply a variety of services to business establishments on a fee-for-contract basis.

As in consumer services, there are many reasons behind the growth in business services. One reason for the growth is the desire for businesses to become more competitive in both domestic and international markets by reducing overhead costs. To accomplish this, organizations are transferring service activities, formerly performed by in-house staff, to firms which specialize in those activities. However, simply transferring the work to business services does not account for the explosive employment growth in this industry.

Among other explanations for the expansion of the business services industry is the effect of changes in business practices. Changes in business practices occur for many reasons such as the development of new technologies and innovations (e.g. computer hardware and software). Changes in the relative prices of inputs can also change business practices. This happened in the 1970s when energy prices shot up, affecting both operating and transportation costs. Shifts in political, social, and economic conditions can also affect business practices which in turn can affect the business services industry.

In addition to the transfer of work to business services and changes in business practices, the increasing demand for information has spurred business services growth. As the cost of purchasing information declines, through computer and data processing firms spreading the costs over many users, firms' information demands and requirements grow. Likewise, management and business consulting services have spread the costs of acquiring technical knowledge in demography, economics, marketing, engineering, and other fields among many users.

Two more explanations for the boom in business services are the upsurge in the number of laws and regulations at all governmental levels and the expansion of foreign trade. There has been a huge increase in the number of laws and regulations at all governmental levels since 1970. Many of these laws deal with banking, construction, the environment, labor relations and safety, transportation, and other fields that touch on business interests. Many firms find it necessary to seek expert advice and assistance from the business services industry. The growth in foreign trade has brought about coincident growth in business services with additional growth caused by the export of business services.

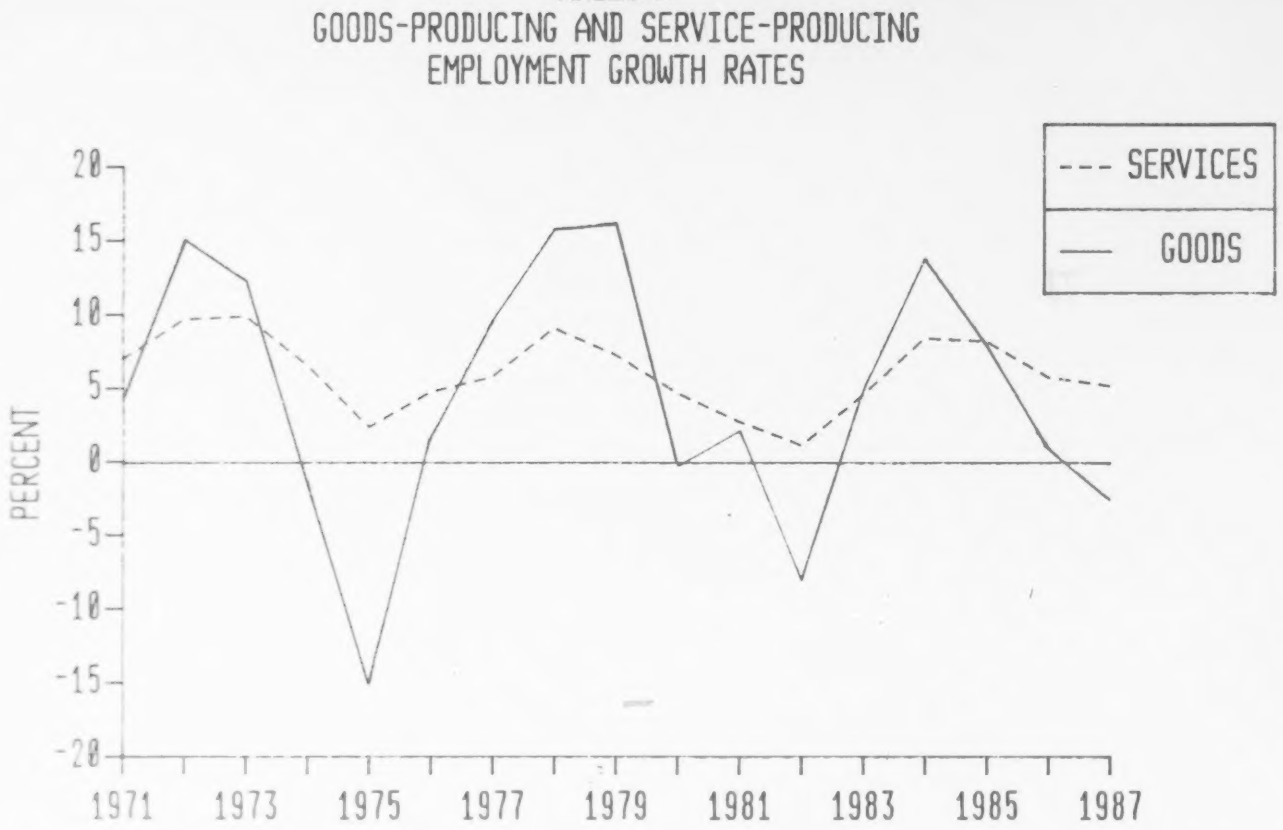
The third group of services depends on both consumer and business demand. Included in this group are TCPU, FIRE, and government. In the TCPU sector, transportation holds the same employment share in 1987 that it did in 1970 (2.6 percent). Despite deregulation boosting employment in the transportation industry at both the national and state level and the emergence of metropolitan Phoenix as a southwestern hub, the transportation industry grew at the same pace as the state's economy. This shows that the industry's growth is contingent on the health of both the state and national economies. Although Arizona will continue to grow in popularity as a convention and vacation destination, the share of transportation employment should remain constant as the result of the consolidation of transportation businesses in both the trucking and airline industries. The communications and public utilities share of employment has actually declined since 1970. Arizona's vigorous population and business growth since the 1970s boosted the demand for these services, but employment growth was constrained by numerous technological advances in these fields.

In the FIRE industry, the real estate sector showed the strongest growth over the 1970-1987 period. Growth in this area was also propelled by the state's population boom and business growth. The growth stimulated residential and commercial construction which in turn resulted in a flourishing real estate market. Since 1970, employment in the real estate industry only experienced declines during the 1975-76 recession.

The employment share of the finance and insurance sectors has also increased. The growing demand for these services led to employment growth in spite of the consolidation and technological advances which occurred within the banking industry. Both consumers and businesses have been demanding a greater variety of and more services.

IMPLICATIONS FOR THE FUTURE

While it is generally acknowledged that the service-producing industries will continue to play an even



ARIZONA
GOODS-PRODUCING AND SERVICE-PRODUCING
EMPLOYMENT GROWTH RATES

greater role in our personal and professional lives, there is some debate as to whether a service-based economy can provide a sound economic foundation for the nation and Arizona. A key issue is whether services themselves create economic wealth or are merely the process by which wealth is redistributed. Others do not contest the ability of the service-producing industries to create wealth, but they maintain that the wage structures of the service-producing industries are bipolar. That is, the wages either fall at the high end or the low end of the spectrum, thus creating greater economic inequality. Some analysts contend that because the service-producing industries merely redistribute wealth and have a relatively low-paying wage structure, their relative growth will lead to economic instability.

In refuting the argument that a service-based economy is simply a means of transferring wealth and not creating it, one need only look at the fact that the United States has been a service-based economy for nearly 40 years, and the nation's gross output has increased across industries during that time. The increase in output is a reflection of both increased productivity in the goods-producing industries and also that the service-producing sectors do generate wealth. For example, services like data processing, accounting, and bookkeeping create tangible output which in turn creates wealth. Looking at gross national product (GNP) as a measure of economic growth, there has been a 46.5 percent increase in real terms since 1970. There are a number of other economic indicators such as income growth and the corresponding increase in consumption expenditures which support the conclusion that the economy continues to grow and prosper as the services industries expand their share of the total economy.

Another reason for the concern about the shift away from goods-producing industries toward service-producing industries is the fear that this will lead to the disappearance of well-paying manufacturing jobs. It has been argued that the declining manufacturing industries have a large portion of middle-income earners while the growing services and high-tech industries have a bipolar wage structure. The shift among industries, therefore, will lead to a declining middle class. However, several studies have cast doubt on that assertion. While studies have found that middle-income jobs have declined slightly as a percentage of total employment, they also show that lower paying jobs have declined even further. Declines in some of the higher paying manufacturing industries have at least been matched by declines in lower paying manufacturing industries. This, however, does not confirm that there is no bipolarization, but it does not support the conclusion.

To support the conclusion that the shift from goods-producing to service-producing industries leads to bipolarization of earnings, the data would have to show that the distribution of low and high earnings occupations is concentrated in the service-producing industries. Earlier studies covering the period from 1960 to the mid-1970s backed up this conclusion, but more recent analyses indicate that the trend toward bipolarization of wages has subsided. Also, based on projections of employment and occupations, it is not likely to occur.

Studies which do state that the middle class is shrinking have found that this occurrence is the result of the increase in the number of young workers and the number of women who have entered the job market. These workers traditionally take lower paying jobs, resulting in a larger number of workers at the low end of the wage scale. This implies that it is changes in the structure of the labor force that may be causing any bipolarization of the wage structure and not the shift to services.

Examination of the graph showing growth rates in goods-producing and service-producing employment shows that the trend toward services has moderated business cycle swings. The service-producing industries have not been in recession since 1970. The goods-producing industries, on the other hand, have been in recession in five different years. This finds the contention that the shift to services will result in more economic instability invalid.

Economic growth in any area is directly related to the performance of its "export" industries. Surprisingly to many, there are services which are often directly exportable. In Arizona's case, two of these are tourism, generated through both recreational travel and business conventions, and the state's large retirement community. Neither tourists nor retirees who move to Arizona from other states contribute to the productive capacity of the state. Instead, they bring their incomes which were earned elsewhere and distribute them here in exchange for services. Because of the state's tourism and large retirement population, the state can support a larger proportion of service-based industries.

This analysis supports the hypothesis that the national and state economies have reached the third phase of economic development, growing from agricultural-based economies to manufacturing-based economies and finally to service-based economies. Service-based economies are not necessarily weaker and do not suggest that our economic future will be unstable. Instead, the shift to a service-based economy is inevitable and will ensure that the economy will continue to grow and thrive.

Rosemary Reardon

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The Arizona Labor Force in March

Arizona's unemployment rate edged back down to 5.6 percent in March as 5,500 more residents found jobs and 2,300 dropped from the ranks of the unemployed. Arizona's rate remained even with the nation's for the second straight month as it also dipped down. Maricopa County's rate dropped to 4.6 percent, while Pima County's remained steady at 4.6 percent.

The state's economy muddled through another month as the long-awaited, high-tech manufacturing recovery eluded us again, the construction industry prolonged its slide, and in-migration slowed. Overall, 4,900 wage and salary jobs were added in March for a 3.2 percent growth rate over the last 12 months. This rate of growth matches the nation's, but it is not noteworthy compared to Arizona's explosive growth in the recent past. The service-producing industries continue to drive the economy, while the goods-producing sectors struggle.

For another month, Arizona's high-tech machinery manufacturers failed to feel the effects of the nation's renewed export growth, adding only 100 jobs in March. At first glance, the announcement by the U.S. Commerce Department of the increase in the trade deficit would appear to be bad news for a resurgence of the state's machinery manufacturing industry. However, total exports grew 5.5 percent and exports of manufactured goods, in particular, rose 7.7 percent. This increase in the trade deficit is the first in four months and is considered an aberration. Also, the further drop in the trade-weighted value of the dollar should further stimulate U.S. export activity.

In the other manufacturing sectors, March statistics were mixed. As anticipated, the defense-related aircraft and missile industry extended its decline, dropping 100 more workers. The nondurable goods manufacturers were once again the mainstay of the manufacturing industry, gaining 200 new jobs for an increase of 1,200 over the last 12 months.

Continuing the downward slide, the construction industry lost another 800 jobs in March. Construction employment now totals 94,200, its lowest level in nearly four years. On the bright side, the loss of 800 jobs was the smallest drop since July 1987, perhaps indicating that the rate of decline has slowed. On the dark side, rising interest rates may stall any chance of a construction rebound this year. There will be additional upward pressure on interest rates if the Federal Reserve tightens monetary policy, as expected, to protect the dollar and suppress inflation.

The services industry added 3,000 new jobs in March with all sectors showing strength. Employment in the hotels and lodging industry jumped by 900, contributing to a 9.7 percent over-the-year growth rate. Business services gained 500, mostly in the temporary employment category. Health services advanced 700, and the remaining services classified as "other" picked up 900 new employees. Over-the-year growth in the services industry comes in at 6.7 percent, outpacing all other sectors except transportation, communications, and public utilities (TCPU).

In the other service-producing industries, overall performance was good. TCPU grew by 600 for an over-the-year growth rate of 7.3 percent. Trade and government each added 1,200 new workers in March which translated into growth rates of 2.7 percent and 5.3 percent over the previous 12 months. The finance, insurance, and real estate industry, reflecting gloomy conditions in the construction industry, fell for the third consecutive month, losing 400 jobs.

The outlook for the state's economy is sluggish as factors influencing Arizona's growth remain unchanged. The high-tech manufacturing industry will play a pivotal role in the state's economic future. Improvements will be seen if Arizona manufacturers respond to the nation's rebound in manufacturing exports. Otherwise, the economy will remain in the doldrums.

Rosemary Reardon

LMI Publications--Hot off the Press

The following new or recently revised publications prepared by the DES Research Administration can be ordered from the address on the back of this newsletter or by calling (602) 255-3871. One copy of each publication will be sent at no charge. Multiple copies are available at a nominal charge to help cover the cost of printing. Other DES offices can order these books directly from DES Supply.

The recently revised Central Pima County Major Employers Map (PAL-039A) is primarily designed for those seeking employment in the Tucson metropolitan area. The book lists the names, addresses, phone numbers, and industry classifications of major employers in Pima County. A coded map is included for those unfamiliar with the area. In addition, the book has a list of large shopping centers and a major street guide. A similar book is also available for central Maricopa County.

Helpful Hints for Job Seekers (PAL-106) provides tips on how to conduct an organized job search. It mentions some of the most common mistakes made by job seekers and how to avoid them. The booklet includes techniques to improve the job search and to keep the job after obtaining it.

Arizona Labor Force and Employment

March 1988 (in thousands)

	ARIZONA				
				-- Amt Change --	
	Mar.* 1988	Feb. 1988	Mar. 1987	Feb. to Mar.	1987 to 1988
TOTAL CIVILIAN LABOR FORCE**	1641.0	1637.8	1612.5	+3.2	+28.5
Total Unemployment	90.6	92.9	103.5	-2.3	-12.9
Rate	5.5	5.7	6.4	---	---
Rate (Sea. Adj.)***	5.6	5.7	6.5	---	---
Total Employment	1550.4	1544.9	1509.0	+5.5	+41.4

The Above Labor Force Statistics Should Not Be used for Economic Assistance Programs

NONAGRICULTURAL WAGE AND SALARY EMPLOYMENT BY PLACE OF WORK

	Mar.* 1988	Feb. 1988	Mar. 1987	Feb. to Mar.	1987 to 1988
TOTAL WAGE AND SALARY	1422.7	1417.8	1378.5	+4.9	+44.2
Manufacturing	187.3	187.2	186.1	+0.1	+1.2
Durable Goods	144.9	145.0	144.9	-0.1	+0.0
Stone, Clay and Glass	7.4	7.3	8.2	+0.1	-0.8
Primary and Fabricated Metals	15.8	15.8	15.6	+0.0	+0.2
Primary Metals	7.3	7.3	7.2	+0.0	+0.1
Fabricated Metals	8.5	8.5	8.4	+0.0	+0.1
Machinery	65.3	65.2	64.3	+0.1	+1.0
Other Durable Goods	56.4	56.7	56.8	-0.3	-0.4
Aircraft and Missiles	26.6	26.7	27.7	-0.1	-1.1
Lumber and Wood Products (Except Furniture)	8.3	8.4	8.2	-0.1	+0.1
All Other Durable Goods	21.5	21.6	20.9	-0.1	+0.6
Nondurable Goods	42.4	42.2	41.2	+0.2	+1.2
Food and Kindred Products	9.1	9.0	8.9	+0.1	+0.2
Apparel	4.9	4.9	4.8	+0.0	+0.1
Printing and Publishing	16.3	16.3	16.2	+0.0	+0.1
All Other Nondurable Goods	12.1	12.0	11.3	+0.1	+0.8
Mining and Quarrying	11.8	11.8	11.2	+0.0	+0.6
Copper Mining	8.8	8.8	8.3	+0.0	+0.5
Other Mining and Quarrying	3.0	3.0	2.9	+0.0	+0.1
Construction	94.2	95.0	102.7	-0.8	-8.5
Trans., Communications, and Public Utilities	75.0	74.4	69.9	+0.6	+5.1
Transportation	37.5	37.4	33.6	+0.1	+3.9
Communications and Public Utilities	37.5	37.0	36.3	+0.5	+1.2
Trade	347.8	346.6	338.5	+1.2	+9.3
Wholesale Trade	70.1	70.0	67.4	+0.1	+2.7
Retail Trade	277.7	276.6	271.1	+1.1	+6.6
General Merchandise and Apparel	42.7	42.7	41.2	+0.0	+1.5
Food Stores	45.7	45.9	43.3	-0.2	+2.4
Automotive and Service Stations	32.7	32.8	31.4	-0.1	+1.3
Eating and Drinking Places	100.1	98.7	98.4	+1.4	+1.7
Other Retail Trade	56.5	56.5	56.8	+0.0	-0.3
Finance, Insurance, and Real Estate	94.2	94.6	93.0	-0.4	+1.2
Services and Miscellaneous	361.8	358.8	339.1	+3.0	+22.7
Hotels and Other Lodging Places	40.8	39.9	37.2	+0.9	+3.6
Business Services	77.8	77.3	72.4	+0.5	+5.4
Health Services	90.6	89.9	83.8	+0.7	+6.8
Other Services	152.6	151.7	145.7	+0.9	+6.9
Government	250.6	249.4	238.0	+1.2	+12.6
Federal	42.5	42.5	42.0	+0.0	+0.5
State and Local	208.1	206.9	196.0	+1.2	+12.1
School	123.8	123.0	115.6	+0.8	+8.2

* Preliminary
** Labor force, unemployment, and employment are reported by place of residence.
*** Normal seasonal variations have been eliminated to reflect underlying economic trends.
NOTE Prepared in cooperation with the U.S. Department of Labor, Bureau of Labor Statistics.

Arizona Labor Force and Employment

March 1988 (in thousands)

	MARICOPA COUNTY					PIMA COUNTY				
				-- Amt Change --					-- Amt Change --	
	Mar.* 1988	Feb. 1988	Mar. 1987	Feb. to Mar.	1987 to 1988	Mar.* 1988	Feb. 1988	Mar. 1987	Feb. to Mar.	1987 to 1988
TOTAL CIVILIAN LABOR FORCE**	1015.1	1012.3	997.8	+2.8	+17.3	314.6	313.6	307.2	+1.0	+7.4
Total Unemployment	46.8	47.8	54.9	-1.0	-8.1	14.4	14.8	16.4	-0.4	-2.0
Rate	4.6	4.7	5.5	---	---	4.6	4.7	5.3	---	---
Rate (Sea. Adj.)***	4.6	4.7	5.5	---	---	4.6	4.6	5.4	---	---
Total Employment	968.3	964.5	942.9	+3.8	+25.4	300.2	298.8	290.8	+1.4	+9.4

NONAGRICULTURAL WAGE AND SALARY EMPLOYMENT BY PLACE OF WORK

	Mar.* 1988	Feb. 1988	Mar. 1987	Feb. to Mar.	1987 to 1988	Mar.* 1988	Feb. 1988	Mar. 1987	Feb. to Mar.	1987 to 1988
TOTAL WAGE AND SALARY	935.5	932.4	907.9	+3.1	+27.6	252.5	251.4	244.1	+1.1	+8.4
Manufacturing	136.7	136.6	135.0	+0.1	+1.7	30.6	30.6	30.8	+0.0	-0.2
Durable Goods	106.6	106.8	106.2	-0.2	+0.4	25.0	25.0	25.4	+0.0	-0.4
Stone, Clay and Glass	4.7	4.8	5.5	-0.1	-0.8					
Primary and Fabricated Metals	10.8	10.9	10.8	-0.1	+0.0					
Primary Metals										
Fabricated Metals										
Machinery	52.0	51.8	51.3	+0.2	+0.7					
Other Durable Goods	39.1	39.3	38.6	-0.2	+0.5					
Aircraft and Missiles										
Lumber and Wood Products (Except Furniture)										
All Other Durable Goods										
Nondurable Goods	30.1	29.8	28.8	+0.3	+1.3	5.6	5.6	5.4	+0.0	+0.2
Food and Kindred Products	6.1	6.1	6.0	+0.0	+0.1					
Apparel	3.7	3.6	3.4	+0.1	+0.3					
Printing and Publishing	11.6	11.5	11.6	+0.1	+0.0					
All Other Nondurable Goods	8.7	8.6	7.8	+0.1	+0.9					
Mining and Quarrying	0.6	0.6	0.6	+0.0	+0.0	1.7	1.7	1.6	+0.0	+0.1
Copper Mining										
Other Mining and Quarrying										
Construction	62.8	63.5	70.3	-0.7	-7.5	18.8	18.7	19.3	+0.1	-0.5
Trans., Communications, and Public Utilities	50.7	50.7	46.9	+0.0	+3.8	9.8	9.8	9.3	+0.0	+0.5
Transportation	26.7	26.8	23.8	-0.1	+2.9	4.9	4.9	4.7	+0.0	+0.2
Communications and Public Utilities	24.0	23.9	23.1	+0.1	+0.9	4.9	4.9	4.6	+0.0	+0.3
Trade	234.5	233.3	231.2	+1.2	+3.3	57.4	57.3	54.9	+0.1	+2.5
Wholesale Trade	54.5	54.3	53.2	+0.2	+1.3	8.2	8.1	7.6	+0.1	+0.6
Retail Trade	180.0	179.0	178.0	+1.0	+2.0	49.2	49.2	47.3	+0.0	+1.9
General Merchandise and Apparel	27.5	27.6	26.7	-0.1	+0.8	7.4	7.4	7.1	+0.0	+0.3
Food Stores	29.1	29.3	28.1	-0.2	+1.0	7.8	7.8	7.2	+0.0	+0.6
Automotive and Service Stations	20.2	20.1	19.5	+0.1	+0.7	5.5	5.6	5.3	-0.1	+0.2
Eating and Drinking Places	64.5	63.2	64.1	+1.3	+0.4	18.5	18.5	18.0	+0.0	+0.5
Other Retail Trade	38.7	38.8	39.6	-0.1	-0.9	10.0	9.9	9.7	+0.1	+0.3
Finance, Insurance, and Real Estate	74.7	75.0	73.5	-0.3	+1.2	12.4	12.4	12.9	+0.0	-0.5
Services and Miscellaneous	244.3	242.0	228.5	+2.3	+15.8	68.4	68.1	64.2	+0.3	+4.2
Hotels and Other Lodging Places	24.0	23.6	22.2	+0.4	+1.8	7.4	7.2	6.5	+0.2	+0.9
Business Services	62.5	62.1	57.2	+0.4	+5.3	11.0	10.9	11.1	+0.1	-0.1
Health Services	59.8	59.1	54.7	+0.7	+5.1	19.2	19.1	17.9	+0.1	+1.3
Other Services	98.0	97.2	94.4	+0.8	+3.6	30.8	30.9	28.7	-0.1	+2.1
Government	131.2	130.7	121.9	+0.5	+9.3	53.4	52.8	51.1	+0.6	+2.3
Federal										
State and Local										
School										

-- Prepared by Arizona Department of Economic Security,Research Administration (CPS, 1/88)

Nonmetropolitan Counties
Labor Force and Employment
March 1988

	Apache	Cochise	Coconino	Gila	Graham	Greenlee	La Paz
CIVILIAN LABOR FORCE*	14,775	34,925	41,525	12,500	7,825	3,050	4,925
Total Unemployment	2,350	2,850	3,225	1,575	775	325	350
Rate	15.9%	8.2%	7.8%	12.6%	9.9%	10.7%	7.1%
Rate (Seas. Adj.)**	16.5%	7.8%	7.8%	12.2%	9.9%	10.1%	7.1%
Total Employment	12,425	32,075	38,300	10,925	7,050	2,725	4,575

THE ABOVE LABOR FORCE STATISTICS SHOULD NOT BE USED FOR ECONOMIC ASSISTANCE PROGRAMS

	Apache	Cochise	Coconino	Gila	Graham	Greenlee	La Paz
TOTAL WAGE AND SALARY	15,175	25,175	38,175	10,500	5,000	2,975	3,275
Manufacturing	825	1,225	2,825	1,300	200	75	225
Mining & Quarrying	25	100	150	1,350	0	1,600	50
Construction	925	1,125	1,525	650	200	275	125
T.C.P.U.	2,225	1,550	3,000	400	150	50	75
Trade	1,500	5,450	8,725	2,300	1,325	225	1,075
F.I.R.E.	350	650	800	275	125	25	100
Services & Misc.	4,375	4,475	9,625	1,625	850	125	825
Government	4,950	10,600	11,525	2,600	2,150	600	800

	Mohave	Navajo	Pinal	Santa Cruz	Yavapai	Yuma
CIVILIAN LABOR FORCE*	30,400	26,275	38,200	9,850	35,775	51,250
Total Unemployment	1,900	3,325	3,325	750	2,325	6,275
Rate	6.3%	12.7%	8.7%	7.6%	6.5%	12.2%
Rate (Seas. Adj.)**	6.1%	12.4%	8.7%	9.0%	6.4%	16.0%
Total Employment	28,500	22,950	34,875	9,100	33,450	44,975

THE ABOVE LABOR FORCE STATISTICS SHOULD NOT BE USED FOR ECONOMIC ASSISTANCE PROGRAMS

	Mohave	Navajo	Pinal	Santa Cruz	Yavapai	Yuma
TOTAL WAGE AND SALARY	21,625	20,125	31,025	9,750	24,025	27,900
Manufacturing	2,950	1,825	3,575	1,150	2,250	1,625
Mining & Quarrying	325	1,225	3,825	0	725	100
Construction	1,600	1,000	1,475	300	2,050	1,400
T.C.P.U.	1,200	1,775	1,225	600	850	1,350
Trade	6,025	3,950	5,675	4,350	6,500	8,750
F.I.R.E.	1,050	400	825	425	1,075	1,000
Services & Misc.	4,750	4,775	4,600	1,375	5,250	6,450
Government	3,725	5,175	9,825	1,550	5,325	7,225

* Adjusted to the Current Population Survey (CPS) to reflect place of residence.

** Seasonal adjustment not applicable for economic assistance programs.

T.C.P.U. = Transportation, Communications, and Public Utilities
F.I.R.E. = Finance, Insurance, and Real Estate

Prepared in conjunction with the U.S. Department of Labor, Bureau of Labor Statistics.

Arizona Labor Force and Employment for Economic Assistance Programs

March 1988

County	Civilian Labor Force	Employment	Unemployment	Rate
Statewide	1,640,941	1,550,364	90,577	5.5%
Apache	14,774	12,415	2,359	16.0
Cochise	34,930	32,088	2,842	8.1
Coconino	41,515	38,287	3,228	7.8
Gila	12,510	10,924	1,586	12.7
Graham	7,817	7,030	787	10.1
Greenlee	3,057	2,729	328	10.7
La Paz	4,933	4,588	345	7.0
Maricopa	1,015,149	968,300	46,849	4.6
Mohave	30,402	28,497	1,905	6.3
Navajo	26,271	22,936	3,335	12.7
Pima	314,525	300,174	14,351	4.6
Pinal	38,202	34,888	3,314	8.7
Santa Cruz	9,842	9,080	762	7.7
Yavapai	35,768	33,455	2,313	6.5
Yuma	51,246	44,973	6,273	12.2

These figures are the only official BLS labor statistics to be used for revenue sharing purposes. They are not designed to be used as economic indicators.

NOTE: Series for Yuma and La Paz counties start January 1983. Data are not comparable to any past series.

Arizona Unemployment Insurance Activities

February 1988

	February 1988	January 19881	February 1987	% Change From One Year Ago
Claimants Served*	30,875	30,097	33,188	-7.0%
Avg. Weeks Unemployed**	8.2	8.6	8.6	-5.4%
Benefits Paid*	$11,030,411	$10,756,176	$12,025,265	-8.3%
Trust Fund Balance	$421,045,357	$409,083,974	$388,735,457	8.3%

*All Programs **UI Only

Estimated Hours and Earnings of Production Workers in Selected Industries
Arizona

INDUSTRY	AVERAGE WEEKLY EARNINGS			AVERAGE WEEKLY HOURS			AVERAGE HOURLY EARNINGS		
	Mar.* 1988	Feb. 1988	Mar. 1987	Mar.* 1988	Feb. 1988	Mar. 1987	Mar.* 1988	Feb. 1988	Mar. 1987
Manufacturing	405.49	398.37	399.78	41.0	40.9	40.3	9.89	9.74	9.92
Aircraft & Missiles	INA	INA	498.97	INA	INA	41.0	INA	INA	12.17
Food & Kindred Prod.	347.26	361.17	398.24	38.8	39.3	41.7	8.95	9.19	9.55
Primary Metals	467.64	451.91	466.34	38.3	38.2	38.1	12.21	11.83	12.24
Machinery	410.27	403.66	377.67	41.4	41.7	39.3	9.91	9.68	9.61
Copper Mining	525.37	511.70	486.82	42.3	41.5	40.3	12.42	12.33	12.08
Construction	441.78	419.37	419.26	37.0	35.6	35.5	11.94	11.78	11.81
Utilities	641.69	613.30	646.51	42.3	41.3	44.1	15.17	14.85	14.66
Retail Trade**	245.34	244.94	238.70	32.8	32.4	32.3	7.48	7.56	7.39
Wholesale Trade	384.91	384.54	385.36	39.6	39.0	40.1	9.72	9.86	9.61

Estimated Hours and Earnings of Production Workers in Selected Industries
Maricopa County

INDUSTRY	AVERAGE WEEKLY EARNINGS			AVERAGE WEEKLY HOURS			AVERAGE HOURLY EARNINGS		
	Mar.* 1988	Feb. 1988	Mar. 1987	Mar.* 1988	Feb. 1988	Mar. 1987	Mar.* 1988	Feb. 1988	Mar. 1987
Manufacturing	430.76	432.63	430.76	41.3	41.4	41.3	10.43	10.45	10.43
Construction	447.62	432.18	422.96	36.6	35.6	35.1	12.23	12.14	12.05
Retail Trade**	263.81	268.59	264.99	33.1	33.2	33.0	7.97	8.09	8.03
Wholesale Trade	397.79	404.79	388.48	39.7	39.3	39.6	10.02	10.30	9.81

Estmated Hours and Earnings of Production Workers in Selected Industries
Pima County

INDUSTRY	AVERAGE WEEKLY EARNINGS			AVERAGE WEEKLY HOURS			AVERAGE HOURLY EARNINGS		
	Mar.* 1988	Feb. 1988	Mar. 1987	Mar.* 1988	Feb. 1988	Mar. 1987	Mar.* 1988	Feb. 1988	Mar. 1987
Manufacturing	369.02	374.79	341.03	38.6	39.0	37.6	9.56	9.61	9.07
Copper Mining	550.41	539.75	471.23	42.8	42.3	39.8	12.86	12.76	11.84
Construction	379.13	369.60	371.77	35.4	35.2	36.7	10.71	10.50	10.13
Utilities	579.30	580.03	547.96	42.1	42.4	41.2	13.76	13.68	13.30

*Preliminary.
**Excludes eating and drinking places.

Note: These estimates are based on a sample of full- and part-time production and related employees whose payroll and hours are reported for the pay period which includes the 12th of the month. Prepared in cooperation with the U.S. Department of Labor, Bureau of Labor Statistics.

Workers' Compensation

The history of workers' compensation goes back to 1908 when the first effective compensation law in the United States was enacted, providing limited benefits for certain federal employees engaged in hazardous work. Today, there are workers' compensation programs in all 50 states and federal programs to cover workers in the District of Columbia, federal government employees, and longshore and harbor workers.

Workers' compensation provides medical and income protection to workers whose disability is the result of a work-related injury or illness. It also provides survivor benefits to the dependents of workers whose death results from a job-related accident or an occupational disease. Proof of employer negligence is not a prerequisite to qualify.

The state programs are generally administered by industrial commissions or special units within state departments of labor. The federal programs are administered by the U.S. Department of Labor (except in the District of Columbia).

Back in 1925, the Arizona legislature passed laws relating to workman's compensation and established a no-fault insurance plan which is fully paid by the employer. Today, nearly every employed Arizonan is covered by workers' compensation.

In Arizona, the Industrial Commission administers the workers' compensation law. It hears disputed claims and regulates the benefits provided by all insurance carriers. It also sets safety standards, enforces state and federal safety regulations, and enforces labor laws.

The Department of Insurance, on the other hand, regulates and approves rates for all insurance carriers in Arizona. Premium rates are authorized based on information supplied by the National Commission on Compensation Insurance (NCCI) and the experience of Arizona workers' compensation claims.

As of October 1, 232 amendments had been enacted in 1987 by 38 states affecting workers' compensation. Significant changes were made concerning medical care and vocational rehabilitation in 18 states. Seven states revised occupational disease statutes. In Oregon, the statute of limitations for filing claims was reduced from five years to one year. Other laws were enacted regarding insurance, attorney fees, penalties, and fines to cover violations.

The Arizona state legislature also made some amendments to the workers' compensation laws in 1987, including the following:

1. Handicapped clients enrolled in vocational training programs offered by nonprofit organizations may now be covered for workers' compensation at the option of the organization.

2. Effective July 1, 1987, lump-sum compensation payments for certain types of disability or for death may be received up to a maximum of $50,000.

3. A definition for "loss of use" was added to the law for purposes of compensating partial disabilities.

4. A new provision provides for a 25 percent penalty based on any previously awarded benefits for charges of unfair claims processing or bad faith practices by an employer, insurer, or others who handle claims.

Employers generally provide compensation through private or commercial

Table 1

ESTIMATES OF WORKERS' COMPENSATION
(In Thousands)

	Arizona			United States		
	1984	1985*	% Change	1984	1985*	% Change
Total benefit payments	$165,243	$197,571	19.6	$19,685,368	$22,470,112	14.1
Private Insurance**	92,518	108,643	17.4	10,609,775	12,334,404	16.3
State/Federal Fund	57,703	70,967	23.0	5,404,553	5,873,584	8.7
Self Insurance	15,022	17,961	19.6	3,671,040	4,262,124	16.1

* Preliminary data

** Data primarily from A.M. Best Company, a national data-collecting agency for private insurance.

SOURCE: Social Security Bulletin, January 1988.

Table 2

WORKERS' COMPENSATION BENEFIT PAYMENTS BY TYPE OF INSURER
SELECTED YEARS, 1939-1985

Year	Amount in Billions of $	Private Insurance	State and Federal Funds	Self Insurance
1939	0.2	52.0%	29.2%	18.8%
1960	1.3	62.5%	25.1%	12.4%
1974	4.8*	61.8%	23.4%	14.8%
1984	18.0*	58.8%	20.9%	20.3%
1985	20.9*	59.1%	20.5%	20.4%

* Excludes Black Lung program.

SOURCE: Social Security Bulletin, January 1988.

insurance, publicly operated insurance, or self insurance (used primarily by large employers who are able to provide proof of financial ability to carry their own risk).

In the United States, both the amount of benefits to workers and the costs to employers rose substantially from 1984 to 1985. A total amount of $22.5 billion was paid as benefits in 1985, an increase of 14.1 percent from the amount paid in the previous year. These payments were made by 50 state programs, the District of Columbia, two federal programs, and the Black Lung program. Table 1 compares workers' compensation benefit payments in 1984 and 1985.

Benefits in the regular category went up by 15.6 percent in 1985, whereas benefits in the Black Lung program declined by 2.3 percent. The downward trend is expected to continue as older beneficiaries die and a smaller number of new claims is added.

Overall, benefit payments have increased in the last 15 years. Contributing to the increase are the Black Lung program that began in 1970, inflationary increases in wages and medical costs, improvement in state statutory benefit formulas, and the increasing frequency and extent of injuries and illness.

As mentioned above, workers' compensation can be provided by three different methods. Private insurance companies paid nearly 60.0 percent of all benefits, while state fund and self-insured companies together paid the other 40.0 percent. The percent of benefits paid by private insurance companies has remained about the same in the last few years.

On the other hand, the cost of workers' compensation was estimated at $2.93 billion, an increase of nearly 17.0 percent over the cost in the previous year. The cost represents outlays for the payment of current benefits as well as reserves for future benefits, sales and operating costs, rehabilitation costs, claims administration, profits, and taxes.

There are nearly 240 companies in Arizona which write workers' compensation insurance policies for employers. The 1986 National Association of Insurance Companies Market Share Report reveals that $362.4 million of direct premium were earned by these companies. The report also shows that the Arizona State Compensation Fund received nearly 40.1 percent of the "direct premium earned". In the same year, the "direct losses incurred" (to make present and future payments) by these companies was $302.4 million. The loss ratio, which represents the proportion of premium dollar returned to the insured worker in the form of cash and medical services, was .84 in 1986.

Total benefit payments in Arizona during 1985 amounted to $197,571, an increase of about 19.6 percent from the previous year. Private insurance companies paid nearly 55.0 percent of that total, followed by state and federal funds at 30.0 percent.

Jalal Ahmad

SOURCES:

LaVerne C. Tinsley, "State Workers' Compensation: Legislation Enacted in 1987," Monthly Labor Review, January 1988.

William J. Nelson, Jr., "Workers' Compensation: Coverage, Benefits, and Costs, 1985," Social Security Bulletin, January 1988.

State Compensation Fund, 3031 North Second Street, Phoenix, Arizona 85012.

New Developments

"New Developments" is featured each month as a service to employers and job seekers. It is a compilation of public announcements of the more significant new construction, grand openings, major hirings and layoffs, and other employer events that have special significance for Arizona labor markets. The announcements are paraphrased and otherwise edited from articles published in newspapers and other periodicals from throughout the state. "New Developments" is limited to space available, and no attempt is made to compile an exhaustive list of all such events that have occurred during the month.

HOSPITALS - Rehab Systems Co. of Camp Hill, Pennsylvania, has broken ground on a 60-bed rehabilitation hospital near 67th Avenue and Thunderbird Road in Phoenix. The $8.5 million facility will be the first free-standing rehabilitation hospital in Arizona. As many as 200 people will be employed at the facility when it is completed around the end of the year.

EDUCATION - The following school-bond issues have been passed in Valley school districts:

- Phoenix Union High School District--$168 million to renovate and repair eight high schools and a vocational institute, purchase educational equipment, improve programs for handicapped students, and consolidate administrative and business operations.
- Mesa Public Schools--$157 million to build a new high school, three junior high schools, and 12 elementary schools and to buy land and remodel existing schools.
- Scottsdale Unified School District--$126.6 million to build three elementary schools, a middle school, a high school, and a vocational-technical school; to buy land for seven school sites and equipment for new and existing schools; and to remodel existing schools.
- Madison Elementary School District--$24.9 million to repair and remodel six schools.
- Fowler Elementary School District--$7 million to build a school and an administrative-office complex, to acquire land, and to expand Sunridge School.
- Agua Fria Union High School District--$15.9 million to construct new facilities, remodel a cafeteria, and purchase land for a future school.

The Apache Junction Elementary School is under construction on Broadway Avenue between Goldfield and Mountain View roads. The 77,000-square-foot facility will have 31 regular and five special education classrooms, administrative offices, and an exterior amphitheater. Eight hundred students are expected to attend the new school in 1989.

TRANSPORTATION - The Tucson dispatching center of Southern Pacific Transportation Co. will be moved to Houston, Texas. The 1989 move will affect about 45 dispatchers who monitor train movements and crew assignments in Arizona. Twelve dispatch centers in the Midwest and West will be consolidated into three locations. The employees will be asked to relocate.

Construction soon will begin on a $5 million corporate terminal at Sky Harbor International Airport in Phoenix. Plans include a 10,000-square-foot terminal with lounges, a flight planning room, a conference room, showers, an exercise room, a gift shop, a patio and swimming pool area, and a delicatessen. Also, a 28,000-square-foot hangar and office area will be built for overnight or long-term aircraft storage and complete aircraft maintenance services.

DEVELOPMENT - The Chandler Airpark Economic Development Corp. is coordinating the development of a major industrial park near the Chandler Municipal Airport. The corporation plans to put $36 million into the project over the next ten years along with a possible $20 million from city, state, and federal sources. The development, which is keyed to expansion of the airport, is expected to employ about 35,000 people by the year 2005.

Construction has begun on Scottsdale Pavilions, an 800,000-square-foot, mixed-use project to be located at the northeast corner of Pima and Indian Bend roads. The development, scheduled for completion in February 1989, will include national department stores, specialty shops, restaurants, a health club, a multiscreen movie theater, and a 200-room business hotel.

Woodlands Village is a 455-acre project being developed in Flagstaff. Located across I-17 from Northern Arizona University, the development will include an 81,922-square-foot Wal-Mart store, an 18,000-square-foot Mountain Bell facility, a 32,000-square-foot Woodlands Center showroom/warehouse, a 230-unit Cienega Apartment Complex, Flagstaff Engineering, and a Roman Catholic parish church.

Ryland Homes will be developing a 17.6-acre site at Red Mountain Ranch, a Mesa subdivision located on Bush Highway north of Thomas Road. The company will build 70 homesites, a park area, and a 1.25-acre greenbelt along Recker Road. The homes will range in size from 1,450 to 2,100 square feet and be priced from $98,000 to $118,000.

The Goodyear City Council has approved plans for The Goodyear City Center, a 40-acre, mixed-use development to be located at Yuma and Reems roads. When completed in 1990, the city-owned project will include a new city hall, a library, a museum, an exposition hall, an activity center, a hotel, and retail and commercial buildings. Construction is expected to begin in the spring of 1989.

The Deck at Central Avenue, a $75 million park, is being built on top of the Papago Freeway between Third Street and Third Avenue south of McDowell Road in Phoenix. Preliminary plans for the 29-acre park include grassy areas, trees, picnic areas, ponds, fountains, cafes, Japanese gardens, a walkway with space for public art exhibits, parking, an amphitheater with seating for 1,000, and a large field that could hold 20,000 people for festivals. A bus station will be built below the park. The park is expected to open in early 1990.

Construction is under way on a 240-unit retirement community at 17400 North 88th Avenue in the Valley. Called Sierra Winds, the $14.2 million community will feature a health care center, a putting green, and shopping and dining facilities. Completion of the 366,000-square-foot project is scheduled for March 1989.

HOTELS - The Thunderbird Resort at South Mountain is being planned for 169 acres at Seventh Street and Dobbins Road in Phoenix. The resort will include a 500-room hotel and an 18-hole golf course. Ground should be broken within a year, with completion expected by 1991.

Construction is under way on Fountain Hills Resort, a 120-suite hotel being built near the Mayo Clinic. The resort, to be completed in

December, will include ten buildings, a restaurant, a lounge, and meeting facilities.

A $4.8 million Comfort Suites hotel is being planned for 67th Avenue and Interstate 10 in Phoenix. The new hotel will include 126 units, a pool and whirlpool, heavily landscaped grounds and complimentary continental breakfasts.

MANUFACTURING - Learjet Corp. is moving its aircraft-manufacturing operations from Tucson to Wichita, Kansas. About 50 to 100 jobs will be eliminated and up to 250 jobs transferred. The cost-cutting consolidation will begin in May and be completed by mid-November.

Inertia Dynamics Corp. of Chandler has announced a three-phase, five-year expansion program. Employment could increase 100 to 200 workers by March 1989, 300 to 400 by 1991, and 1,200 by 1993. The firm designs and manufactures hand-held, gasoline-powered grass and weed trimmers and leaf blowers.

The first phase will be a $2 million addition of 82,000 square feet of manufacturing space that should be under construction by June 1, 1988. Phase 2 will be construction of a 60,000-square-foot warehouse to be completed in 1990. The final phase will consist of 150,000 square feet of space for manufacturing and warehousing.

Sea Ray Boats has laid off a considerable amount of its 500-member work force in Phoenix as the result of an inventory reduction.

The Tactical Electronics Division of Motorola's Government Electronics Group in Scottsdale has received a $37.1 million contract from the Army to make 60,834 electronic bomb fuses.

Optifab Inc. is investing more than $5.5 milion in equipment and tenant improvements for a new 55,000-square-foot facility at 1000 South Priest in Tempe. The company, which designs, engineers, and manufactures aerospace interconnect systems, will be consolidating its Phoenix operations at the new facility this summer. In the next five years, the firm intends to more than double its current 100-plus work force.

Hughes Aircraft Co. has cut its work force in Tucson by about 600 technical and administrative positions. The cuts are a result of defense-budget constraints and lowered anticipated missile production.

CONSTRUCTION - A 6,963-yard, par 72 golf course is under construction at Arizona State University in Tempe. The $6.5 million course, to be located between Scottsdale and Hayden roads south of the Rio Salado, will be open to the public but will be primarily for the ASU golf program and the ASU community.

Los Arcos Crossing, a Scottsdale shopping center at Miller and McDowell roads, is undergoing a $12 million expansion and renovation. All existing buildings will be remodeled, and about 85,000 square feet of space will be added. The first phase of construction is scheduled for completion next spring.

The Gainey Corporate Center is a $60 million office complex planned for the northeastern corner of Double Tree Ranch Road in Scottsdale. The first phase of the 317,500-square-foot project is a two-story building with 117,000 square feet. Ground breaking is scheduled for later this year and completion set for mid-1989.

Construction has begun on Bogel Business Park, a $7.5 million project being built on Pecos Road east of Arizona Avenue in Chandler. The park will include 43 lots and a rail-service dock. Possible tenants are a bulk oil distributor, a landscape firm, and several lumber companies.

American Continental Corp. and the Koll Co. are planning to build four midrise office buildings at 25th and Dunlap avenues in Phoenix. The $80 million project near Metrocenter will include 600,000 square feet. The first phase will be a six-story, 140,000-square-foot building scheduled to start construction during the third quarter of this year.

Construction is expected to begin soon on One Sunvalley Center, a $6.5 million office project in Mesa. The 87,000-square-foot building will be located at the northwest corner of East Main Street and Sunvalley Boulevard. Some of the offices in the five-story building will feature open air balconies, and underground parking will be included.

Richmond American Homes Inc. will be opening a 323-house subdivision within Rita Ranch, a 2,884-acre property near South Houghton Road and Interstate 10 in Tucson. The three- and four-bedroom, single-family homes will be priced from $80,000 to $110,000.

REAL ESTATE - RE/MAX International Inc., a Denver-based real estate network, has opened a regional office at 8320 North Hayden Road in Scottsdale and is planning at least 21 franchised offices throughout Arizona by the end of this year. One office has already been establised in Tempe and two in Scottsdale, while new sites are planned for Tucson, Flagstaff, Yuma, Mesa, Tempe, and other parts of the Valley. The typical office will employ 25 associates.

RETAIL TRADE - A subsidiary of Round the Corner Restaurants Inc., Good Times! Drive Thru Burgers Inc., is planning to open 30 restaurants in Arizona within the next three years. One-minute service will be emphasized.

Ground has been broken on the first major shopping center for Sierra Vista. The $15 million center should be completed in November, creating 600 to 800 permanent jobs. Tenants will include Wal-Mart, J. C. Penney Co., one other major store, and up to 50 other shops.

McDowell Corners, a $4.9 million strip center, is under construction at the southeast corner of McDowell and 43rd Avenue in Phoenix. Tenants at the 80,000-square-foot center will include Mega Foods, Walgreen's, Subway, Kentucky Fried Chicken, and Waffle House.

MINING - Cyprus Minerals Co. will be reopening the Twin Buttes copper mine. The company will start operations at the mine, 25 miles south of Tucson, on a small scale and begin copper production in the second half of the year. Employment could reach 300 in two to three years. Supervisors and planners will most likely be recruited from other Cyprus operations. Additional employees will be hired in the Tucson area.

QUALITY OF LIFE - Economists from the University of Kentucky and Michigan State University have ranked Tucson as tenth among 253 urban areas for the quality of life it offers. Each area was assigned a dollar figure which represents the amount that people are willing to pay to live in desirable areas versus the amount that they must recieve in terms of wages or housing costs to live in less desirable areas. Residents of Tucson were willing to pay nearly $3,200 a year more to live there than in St. Louis, which was ranked at the bottom of the list. The top ranked area was Pueblo, Colorado. Phoenix was ranked 36th.

Arizona Labor Market Newsletter
LABOR MARKET INFORMATION PUBLICATIONS
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Phoenix, Arizona 85005

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8/10/88 50465-1

ARIZONA LABOR MARKET INFORMATION

NEWSLETTER

Vol. XII No. 6
June 1988

Unemployment Rate

Seasonally Adjusted
April*

ARIZONA	5.5%
Maricopa County	4.5%
Pima County	4.6%
UNITED STATES	5.4%

Consumer Price Index

U.S. - March 1988
Base = 1982-84

Wage Earner/Clerical Worker -	115.2
% Chg. Year Ago	3.8
All Urban -	116.5
% Chg. Year Ago	3.9

Phoenix - 1st Qtr 1988
Base = 1982-84

All Urban -	117.4
% Chg. Year Ago	3.1

Tucson - 1st Qtr 1988
Base = 1982-84

All Urban -	120.8
% Chg. Yr. Ago	3.0

*Preliminary

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DES **Arizona Department of Economic Security**
— Moving People Toward Self-Sufficiency

What is Labor Productivity?

What productivity is and why it is important to everyone is the topic of this article. Productivity, in its simplest measure, is defined as real gross national product (GNP) per employee hour. In other words, it is simply the real GNP divided by the total number of hours spent on the job by the nation's workers. It is important to everyone because the rate of productivity growth determines how fast the well-being of the average citizen increases.

Before 1950, the United States had enjoyed superior growth of per capita real GNP compared to other industrialized nations (Sweden, Germany, France, Japan, United Kingdom, and Italy) which led to higher standards of living. But since 1950, the U.S. advantage has eroded. Between 1950 and 1973, the United States ranked at the bottom in terms of the rate of per capita GNP growth compared to the six other industrialized nations. The weak performance continued, and between 1973 and 1985 the United States ranked next to the bottom of that list. Nevertheless, U.S. per capita real GNP increased from $1,886 in 1870 to $15,302 in 1985. The slower growth in per capita real GNP was due to slower growth in productivity per labor hour compared to other countries. Indeed, the average growth rate of productivity in the United States was only 0.7 percent between 1973 and 1986 compared to 2.3 percent between 1960 and 1973. The following section will discuss the concept of productivity in more detail and the probable reasons for the slowdown of productivity in the United States.

Productivity, in general, shows the relationship between real physical output and the real input that goes into the production of goods and services in a given time period. The major inputs are labor, capital, and various raw materials as inputs or intermediate purchases. So output can be affected by changing the units of any of these inputs one at a time or all of these inputs simultaneously. The most common way to measure productivity is the amount of goods and services produced by a worker per hour.

Productivity is a competitive element because a business enterprise always wants to know how it can get more units of output per labor hour or per machine or per raw materials than its competitors. An increase in productivity will make the business more competitive.

There are several factors that can affect the productivity of a particular firm or business such as an increase in research and development, a higher investment in plant and equipment, and more applications of computer technology to all kinds of work. An increase in any one of these factors will enable the business to use its work force more effectively, meaning higher labor productivity.

At the national level, the U.S. Bureau of Labor Statitics (BLS) measures productivity for both single-factor and multifactor inputs. BLS has been providing "output per labor hour" or simply "labor productivity" statistics for many decades. It now provides measures for approximately 150 industries. Comparing those indexes can assess whether our labor is getting more or less productive over time. Multifactor productivity, on the other hand, relates output to the combined inputs of capital and intermediate purchases as well as labor. The movement of this index represents the changes in output not accounted for by the directly measurable inputs. The difference between the movement of the multi-factor productivity measure and the productivity of labor measure indi-

Table 1

GROWTH RATES IN
PER CAPITA REAL GNP

Country	1870-1913	1913-1955	1955-1973	1973-1985
United States	2.03	1.65	2.16	1.31
Sweden	2.05	2.25	3.26	1.48
Germany	1.62	1.41	4.00	2.02
France	1.46	1.26	4.35	1.59
Japan	1.50	1.31	8.13	2.94
United Kingdom	0.97	1.05	2.42	1.13
Italy	0.80	1.27	4.69	1.60

SOURCE: Robert J. Gordon, Macroeconomics, Table 19-1, 1987.

cates the impacts of the changes in capital services per hour and the intermediate purchases per hour on the productivity of labor per hour.

Movements in output per hour indexes indicate that many changes are taking place in the economy. Most importantly, it reflects changes in capacity utilizations; the composition of the labor force and technology; economies of scale; research and development; and the substitution of other factors for labor. The business cycle which directly affects the capacity utilization influences productivity even though the influence can be very temporary. Other factors, besides the cyclical factors, affect long-term productivity, which, in an economist's terms, is known as trend productivity.

Trend productivity growth can be defined as the growth that would occur if all resources in the economy were fully employed at desired levels. Trend productivity depends on several factors. Productivity would increase if better technological processes were used, more machinery was used, and the labor force was better skilled. In other words, trend productivity increases with technological progress, more capital per labor, and the growth of worker skills.

Because of cyclical factors, actual productivity growth can deviate from trend productivity growth over a short period of time. Therefore, trend productivity growth can be viewed as potential growth that the economy can have. Potential growth changes over the long run due to the factors mentioned above. The difference between actual productivity growth and trend productivity growth is known as cyclical productivity growth. Cyclical fluctuations in the economy cause businesses to employ resources at a lower rate than desired levels. These cyclical fluctuations in resource employment cause the actual growth path to deviate from the trend growth path.

The effect of the business cycle on productivity can be explained in terms of the fixed nature of some inputs in the short run. Since the stock of capital plant and equipment and the number of available skilled employees are not instantaneously adjustable, they remain to some extent fixed over the course of the business cycle. Thus, when product demand increases after a trough, firms are able to increase output more rapidly than capital and labor inputs, thereby inducing a swift rise in productivity. The opposite occurs during a contraction, giving rise to a procyclical pattern in productivity.

Trend productivity is measured by actual growth in high resource utilization from one year to another year. It is estimated that trend productivity growth slowed in the middle to late 1960s and slowed further after 1973. The estimates show that trend productivity, as measured by actual productivity in high resource utilization, grew at a slower rate from 1968 to 1979 than from 1948 to 1968. Within the 1968-to-1979 period, however, it is estimated that trend productivity grew at an annual rate of 2.1 percent from 1968 to 1973 and only 0.8 percent from 1973 to 1979. That is, average productivity was cut by more than half from 1973 to 1979. During the same period, trend productivity in the goods-producing sector also fell from 2.8 percent between 1968 and 1973 to only 0.8 percent between 1973 and 1979. Since the apparent slowdown in productivity was more severe after 1973, much attention was given by researchers to pin down the reasons for that slowdown, and recommendations were made for government action to stimulate productivity growth.

There were many factors that accounted for the apparent slowdown in productivity growth. Most important of them were:

1. The amount of capital per labor hour in the United States increased less rapidly after 1973 than before. It was estimated that capital per labor hour grew by 3.0 percent per year from 1948 to 1973, but after 1973, it grew only 1.75 percent per year. This fall in capital per labor hour resulted in a reduction in productivity growth increase.

2. Changes in the structure of the labor force in the 1970s. In general, productivity increases with experience for at least several years after workers enter the labor force; thus, increases in the number of inexperienced workers can reduce productivity growth temporarily. During the post-1973 period, an increase in the inexperienced labor force caused productivity growth to slow down.

3. The decline in research and development spending in the United States resulted in slower technological progress, which ultimately may have caused productivity growth to slow down.

4. The rapid increase in energy prices in 1973 also caused growth to slow down. The rise in energy prices was a one-time shock that reduced productivity, since it made the use of energy and thus machinery more expensive, leading firms to attempt to economize on energy use.

There are other factors which may have caused the slowdown. Michael Darby, in his studies on the U.S. productivity slowdown, found that the decline in trend productivity was due more to the price controls of the Nixon administration than to a true decline in trend growth. If, however, there was no decline in productivity, then any policy towards productivity growth would have been inappropriate.

Table 2

MANUFACTURING PRODUCTIVITY GROWTH RATES

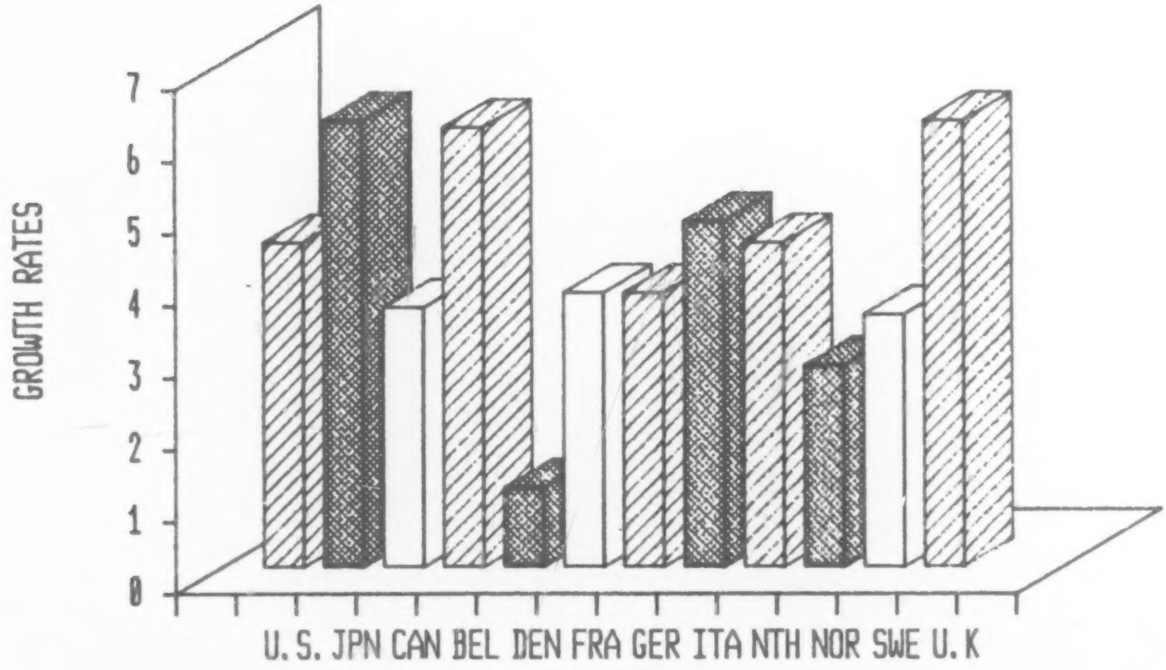
1980-1986

Country	1980	1981	1982	1983	1984	1985	1986	1980-1986
United States	0.0	2.2	2.2	5.8	5.4	5.2	3.7	4.5
Canada	-3.7	4.8	-4.5	7.2	10.8	2.5	-0.3	3.6
Japan	6.9	3.7	6.1	5.4	7.2	7.3	2.7	6.2
Belgium	6.5	7.0	6.0	9.6	4.2	3.0	2.6	6.1
Denmark	5.4	1.7	0.4	4.9	-1.3	-0.3	1.4	1.1
France	0.8	3.1	7.0	2.6	3.0	3.1	2.0	3.8
Germany	0.4	2.2	1.4	5.9	3.7	4.1	1.5	3.8
Italy	5.8	6.8	3.8	4.7	6.4	1.5	1.2	4.8
Netherlands	1.4	2.6	2.1	6.8	10.2	3.3	-0.3	4.5
Norway	-0.4	0.3	2.6	6.7	5.7	1.0	-0.6	2.8
Sweden	1.6	0.4	2.9	7.7	4.4	3.9	0.2	3.5
United Kingdom	-0.7	5.1	6.1	8.5	5.4	3.8	3.6	6.2

SOURCE: Monthly Labor Review, U.S. Bureau of Labor Statistics, March 1988.

AVERAGE MANUFACTURING PRODUCTIVITY GROWTH RATES

1980-1986



PRODUCTIVITY IN RECENT YEARS

Growth rates in manufacturing productivity among industrialized nations are often compared to measure U.S competitiveness in the world. Table 2 reveals that between 1980 and 1986 Japan and the United Kingdom achieved the highest average manufacturing productivity growth rate of 6.2 percent. Among these 12 industrialized nations, the United States ranked third with 4.5 percent after Italy with 4.8 percent. However, in 1986 alone, the United States hit the top of the list in terms of labor productivity in manufacturing with 3.7 percent.

Now, a brief comparison of labor productivity will be made among different sectors of the U.S. economy in 1987. The current phase of the economic expansion, which started in November 1982, is now in its twenty-second quarter. During 1987, productivity in the business and nonfarm business sectors showed slight increases while manufacturing productivity rose more rapidly. Table 3 reveals percent change in annual productivity, output, hours, employment, unit labor costs, and hourly compensation from 1980 to 1987 for major divisions of the economy.

Business Sector

BLS recently reported revised productivity data for the fourth quarter and year of 1987. Productivity increased slowly in the business and nonfarm business sectors from 1986 to 1987. Productivity growth was more rapid in manufacturing than in the broader sectors, but was nonetheless slower than the preceding year's increase.

Business sector productivity rose at an annual average rate of 0.9 percent during 1987, and hours increased by 2.4 percent, whereas output in this sector increased by 3.4 percent. The business sector is the broadest sector for which productivity is measured, accounting for about four-fifths of GNP.

Business sector employment continued to grow during 1987, adding about 2.2 million jobs (2.6 percent). But the pace was slower than was typical for earlier quarters of the recovery. In all, over 11.3 million jobs have been added to business payrolls since the expansion phase of the business cycle began in early 1983. At 85.1 million, the business sector accounted for 83.3 percent of U.S. nonfarm wage and salary employment.

Hourly compensation increased 2.9 percent in 1987 compared with a 3.9 percent gain during 1986. The increase in 1987 was the smallest since 1955 when a 2.5 percent increase was recorded. Hourly compensation includes wages and salaries, supplements, and employer payments to employee benefit plans and measures employer costs rather than employee income. Unit labor costs are compensation expenses per unit of output, and thus are influenced by changes in both hourly compensation and productivity. Unit labor costs increased a modest 2.0 percent during both 1986 and 1987. Real hourly compensation declined 0.7 percent in 1987, compared with a 2.0 percent rise in 1986. This was the first drop since 1984 (when it fell 0.2 percent). The implicit price deflator for the business sector increased 2.5 percent in 1987, up from the 2.1 percent gain in 1986.

Nonfarm Business

Productivity in the nonfarm business sector increased by 0.8 percent during 1987, whereas output increased by 3.4 percent and hours of all persons increased by 2.6 percent. Employment rose by more than 2.5 million jobs (2.5 percent) in 1987, a cumulative increase of 12.5 million jobs (14.0 percent) over the recession low of 1982.

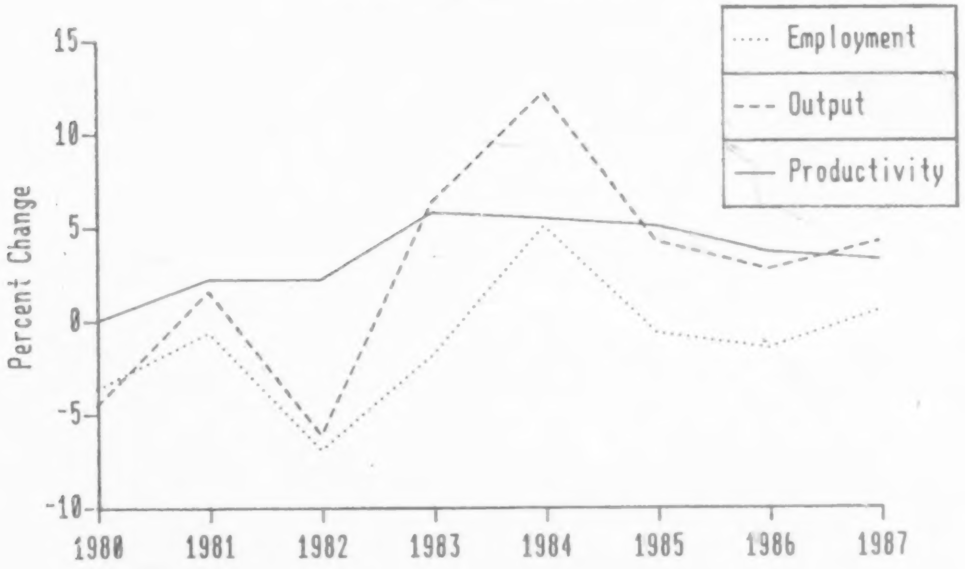
Table 3

ANNUAL PRODUCTIVITY AND RELATED MEASURES
UNITED STATES
PERCENT CHANGE, 1980-1987

	1980	1981	1982	1983	1984	1985	1986	1987
Business								
Productivity	-0.3	1.4	-0.4	2.7	2.5	1.8	1.9	0.9
Output	-1.1	2.1	-3.1	4.2	8.4	4.0	3.3	3.4
Hours	-0.8	0.7	-2.8	1.5	5.7	2.1	1.4	2.4
Employment	0.4	1.3	-1.9	0.8	5.6	3.4	2.2	2.6
Unit Labor Costs	10.9	7.7	8.3	1.4	1.5	2.8	2.0	2.0
Hourly Compensation	10.5	9.2	7.8	4.2	4.1	4.7	3.9	2.9
Nonfarm Business								
Productivity	-0.4	1.0	-0.6	3.3	2.1	1.2	1.6	0.8
Output	-1.2	1.7	-3.3	5.0	8.3	3.6	3.2	3.4
Hours	-0.7	0.7	-2.7	1.6	6.0	2.5	1.6	2.6
Employment	0.6	0.8	-1.7	0.7	4.8	3.2	2.1	2.5
Unit Labor Costs	11.0	8.3	8.4	1.0	1.8	3.2	2.2	2.0
Hourly Compensation	10.5	9.4	7.8	4.3	3.9	4.4	3.9	2.8
Manufacturing								
Productivity	0.0	2.2	2.2	5.8	5.5	5.1	3.7	3.3
Output	-4.5	1.6	-6.1	6.4	12.2	4.3	2.8	4.3
Hours	-4.5	-0.6	-8.1	0.6	6.4	-0.8	-0.9	1.0
Employment	-3.6	-0.6	-6.9	-1.8	5.1	-0.6	-1.4	0.6
Unit Labor Costs	11.7	7.3	6.2	-2.5	-1.9	0.2	-0.4	-1.9
Hourly Compensation	11.6	9.6	8.5	3.1	3.4	5.3	3.3	1.3

SOURCE: U.S. Bureau of Labor Statistics, News Release, USDL:88-53, February 4, 1988.

PRODUCTIVITY AND RELATED MEASURES
IN MANUFACTURING
PERCENT CHANGE, 1980-1987



Hourly compensation increased by a moderate rate of 2.8 percent in 1987. Yet, real hourly compensation fell 0.8 percent, the first drop in the annual measure since 1984 when it declined by 0.2 percent.

Unit labor costs increased by 2.0 percent in 1987 and 2.2 percent in 1986. The implicit price deflator for the nonfarm business sector rose by 2.4 percent in 1987, compared with 2.3 percent in 1986.

Manufacturing

Productivity in the manufacturing sector increased by 3.3 percent in 1987 compared with a 3.7 percent increase during 1986. Productivity gains in manufacturing have been substantially larger recently than in the more comprehensive business sector. Output rose by 4.3 percent, and hours of all persons increased by 1.0 percent. Employment grew by 118,000 new jobs (0.6 percent) in 1987. Since 1982, manufacturing employment has grown by 331,000 jobs (1.8 percent). Productivity grew in both durables and nondurables in 1987, but hours increased mainly in nondurables. Output also grew more rapidly in nondurable goods industries.

Hourly compensation of all manufacturing sector workers increased by 1.3 percent during 1987, the smallest gain ever recorded in this data series that began in 1947. When the increase in consumer prices is taken into account, real hourly compensation fell by 2.2 percent, the largest drop ever experienced. There has been little change in manufacturing real hourly compensation in about a decade. Unit labor costs fell 1.9 percent in 1987, compared with a 0.4 percent drop during 1986.

In summary, it is important to know the work force's productivity. It is important because the rate of productivity growth determines how rapidly the well-being of the average citizen increases. It is important because productivity growth is a competitive element. It tells us how competitive the United States is compared to other nations. Productivity growth also has implications for the nation's total spending. It determines whether society is providing increased resources each year to allow both private households and the government to spend more or less.

Jalal Ahmad

SOURCES:

Rudiger Dornbush and Stanley Fischer, Macroeconomics, 1981.

Arthur S. Herman, "Productivity in Industries and Government," Monthly Labor Review, U.S. Bureau of Labor Statistics, April 1988.

Jerome A. Mark, "Measuring Single-factor and Multifactor Productivity," Monthly Labor Review, U.S. Bureau of Labor Statistics, December 1986.

Charles S. Morris, "The Productivity 'Slowdown': A Sectoral Analysis," Economic Review, Federal Reserve Bank of Kansas City, April 1984.

Mark K. Sherwood, "Multifactor Productivity in Motor Vehicle Industries," Monthly Labor Review, August 1987.

The Arizona Labor Force in April

Arizona's unemployment rate remained steady at 5.5 percent in April as both the labor force and unemployment declined. The 8,300 loss in the labor force plus the 1,300 drop in unemployment indicate that the unemployed are either leaving the state or are no longer looking for work. Arizona's unemployment rate now hovers over the nation's rate of 5.4 percent.

April's statistics conveyed both good news and bad news for Arizona's economy. The loss of 200 wage and salary jobs was the state's worst March-to-April job growth performance on record. The decline resulted from the languishing construction industry and the winding down of the winter visitor season. The upswing in machinery manufacturing employment was the bright spot in an otherwise lackluster month.

Overall, the manufacturing industry added 600 new jobs. Unlike the first three months of the year when growth mainly occurred in the nondurable goods sector, most of April's gains came in high-tech machinery (up 300) and other durable goods (up 200). These advances could be an indication that the nation's export resurgence has finally hit Arizona. As the national semiconductor book-to-bill ratio has shown significant gains in recent months, the outlook for the state's high-tech manufacturing industry is cautiously optimistic. Possible gains in high-tech machinery manufacturing employment could offset anticipated losses in the defense-related aerospace industry.

In April, 500 construction jobs were lost. This was the second consecutive month in which the rate of decline slowed, suggesting the possibility that the industry's decline may bottom out soon. In the near term, however, no rebound is in sight, particularly in the light of rising interest rates and weak activity in building permits.

With the winter visitor exodus which traditionally begins in April, tourist-related trade and services saw seasonal drop-offs in employment. Retail trade lost 300 workers, with the loss distributed among all types of retail establishments. The hotel and lodging industry and health services also saw personnel reductions which totaled 400. In the coming months, this trend will persist as establishments continue to gear down.

The finance, insurance, and real estate industry dropped another 400 workers in April. Since January, 1,000 jobs have been lost as the real estate sector has been plagued by poor conditions in the construction industry and the financial sector suffers through a correction phase resulting from the substantial build-up following the deregulation of financial institutions.

Communications and public utilities trimmed 100 jobs. This trend should continue through the summer months as announced layoffs in the utilities sector take place. The addition of 100 jobs in mining reflected improving health of the industry. Outlook for the industry is bright as copper prices remain high and the supply-demand balance is maintained. Government employment advanced 300 with gains at all levels, except schools.

Arizona's economic outlook calls for moderate growth despite April's gloomy job statistics. If the gains in machinery manufacturing are indicative of a manufacturing rebound, and the construction industry's slump bottoms out, then stronger growth can be expected in the near term.

Rosemary Reardon

Arizona Labor Force and Employment

Arizona Labor Force and Employment

April 1988 (in thousands)

	ARIZONA					MARICOPA COUNTY					PIMA COUNTY				
				-- Amt Change --					-- Amt Change --					-- Amt Change --	
	Apr.* 1988	Mar. 1988	Apr. 1987	Mar. to Apr.	1987 to 1988	Apr.* 1988	Mar. 1988	Apr. 1987	Mar. to Apr.	1987 to 1988	Apr.* 1988	Mar. 1988	Apr. 1987	Mar. to Apr.	1987 to 1988
TOTAL CIVILIAN LABOR FORCE**	1632.1	1640.4	1618.8	-8.3	+13.3	1013.1	1016.6	1003.3	-3.5	+9.8	312.6	313.4	308.1	-0.8	+4.5
Total Unemployment	88.4	89.7	101.6	-1.3	-13.2	45.0	46.7	53.0	-1.7	-8.0	14.1	14.3	15.4	-0.2	-1.3
Rate	5.4	5.5	6.3	---	---	4.4	4.6	5.3	---	---	4.5	4.6	5.0	---	---
Rate (Sea. Adj.)***	5.5	5.5	6.5	---	---	4.5	4.6	5.4	---	---	4.6	4.6	5.2	---	---
Total Employment	1543.7	1550.7	1517.2	-7.0	+26.5	968.1	969.9	950.3	-1.8	+17.8	298.5	299.1	292.7	-0.6	+5.8

The Above Labor Force Statistics Should Not Be used for Economic Assistance Programs

NONAGRICULTURAL WAGE AND SALARY EMPLOYMENT BY PLACE OF WORK

	ARIZONA					MARICOPA COUNTY					PIMA COUNTY				
	Apr.* 1988	Mar. 1988	Apr. 1987	Mar. to Apr.	1987 to 1988	Apr.* 1988	Mar. 1988	Apr. 1987	Mar. to Apr.	1987 to 1988	Apr.* 1988	Mar. 1988	Apr. 1987	Mar. to Apr.	1987 to 1988
TOTAL WAGE AND SALARY	1423.4	1423.6	1387.1	-0.2	+36.3	935.6	936.3	913.4	-0.7	+22.2	252.0	252.1	245.2	-0.1	+6.8
Manufacturing	188.3	187.7	185.9	+0.6	+2.4	137.5	136.9	134.6	+0.6	+2.9	30.8	30.7	31.0	+0.1	-0.2
Durable Goods	145.8	145.2	145.1	+0.6	+0.7	107.3	106.9	106.2	+0.4	+1.1	25.1	25.1	25.4	+0.0	-0.3
Stone, Clay and Glass	7.5	7.4	8.2	+0.1	-0.7	4.8	4.8	5.5	+0.0	-0.7					
Primary and Fabricated Metals	15.8	15.8	15.8	+0.0	+0.0	10.8	10.8	10.8	+0.0	+0.0					
Primary Metals	7.3	7.3	7.2	+0.0	+0.1										
Fabricated Metals	8.5	8.5	8.6	+0.0	-0.1										
Machinery	65.7	65.4	64.0	+0.3	+1.7	52.2	52.0	51.0	+0.2	+1.2					
Other Durable Goods	56.8	56.6	57.1	+0.2	-0.3	39.5	39.3	38.9	+0.2	+0.6					
Aircraft and Missiles	26.6	26.6	27.7	+0.0	-1.1										
Lumber and Wood Products (Except Furniture)	8.5	8.4	8.3	+0.1	+0.2										
All Other Durable Goods	21.7	21.6	21.1	+0.1	+0.6										
Nondurable Goods	42.5	42.5	40.8	+0.0	+1.7	30.2	30.0	28.4	+0.2	+1.8	5.7	5.6	5.6	+0.1	+0.1
Food and Kindred Products	9.2	9.1	8.8	+0.1	+0.4	6.3	6.1	6.0	+0.2	+0.3					
Apparel	4.9	4.9	4.7	+0.0	+0.2	3.7	3.7	3.2	+0.0	+0.5					
Printing and Publishing	16.3	16.3	16.3	+0.0	+0.0	11.5	11.5	11.6	+0.0	-0.1					
All Other Nondurable Goods	12.1	12.2	11.0	-0.1	+1.1	8.7	8.7	7.6	+0.0	+1.1					
Mining and Quarrying	11.9	11.8	10.5	+0.1	+1.4	0.6	0.6	0.6	+0.0	+0.0	1.7	1.7	1.6	+0.0	+0.1
Copper Mining	8.9	8.8	8.3	+0.1	+0.6										
Other Mining and Quarrying	3.0	3.0	2.2	+0.0	+0.8										
Construction	93.9	94.4	103.3	-0.5	-9.4	62.6	62.9	69.5	-0.3	-6.9	18.6	18.8	19.8	-0.2	-1.2
Trans., Communications, and Public Utilities	74.5	74.5	71.4	+0.0	+3.1	50.5	50.6	48.1	-0.1	+2.4	9.6	9.5	9.4	+0.1	+0.2
Transportation	37.3	37.2	35.3	+0.1	+2.0	26.7	26.7	25.4	+0.0	+1.3	4.8	4.7	4.6	+0.1	+0.2
Communications and Public Utilities	37.2	37.3	36.1	-0.1	+1.1	23.8	23.9	22.7	-0.1	+1.1	4.8	4.8	4.8	+0.0	+0.0
Trade	346.5	347.0	339.3	-0.5	+7.2	233.7	234.0	231.1	-0.3	+2.6	57.2	57.4	55.1	-0.2	+2.1
Wholesale Trade	69.8	70.0	67.7	-0.2	+2.1	54.6	54.4	53.5	+0.2	+1.1	8.3	8.3	7.8	+0.0	+0.5
Retail Trade	276.7	277.0	271.6	-0.3	+5.1	179.1	179.6	177.6	-0.5	+1.5	48.9	49.1	47.3	-0.2	+1.6
General Merchandise and Apparel	42.3	42.4	41.8	-0.1	+0.5	27.1	27.3	27.1	-0.2	+0.0	7.3	7.4	7.2	-0.1	+0.1
Food Stores	45.5	45.6	44.0	-0.1	+1.5	29.0	29.1	28.5	-0.1	+0.5	7.7	7.7	7.3	+0.0	+0.4
Automotive and Service Stations	32.9	32.9	32.1	+0.0	+0.8	20.3	20.3	20.0	+0.0	+0.3	5.6	5.6	5.3	+0.0	+0.3
Eating and Drinking Places	99.9	100.0	97.3	-0.1	+2.6	64.3	64.5	63.0	-0.2	+1.3	18.4	18.5	17.7	-0.1	+0.7
Other Retail Trade	56.1	56.1	56.4	+0.0	-0.3	38.4	38.4	39.0	+0.0	-0.6	9.9	9.9	9.8	+0.0	+0.1
Finance, Insurance, and Real Estate	93.8	94.2	93.9	-0.4	-0.1	74.4	74.8	74.5	-0.4	-0.1	12.4	12.4	12.7	+0.0	-0.3
Services and Miscellaneous	363.1	362.9	344.3	+0.2	+18.8	245.2	245.2	232.4	+0.0	+12.8	68.3	68.3	64.6	+0.0	+3.7
Hotels and Other Lodging Places	41.2	41.3	37.7	-0.1	+3.5	24.1	24.4	21.7	-0.3	+2.4	7.2	7.3	7.0	-0.1	+0.2
Business Services	78.1	78.0	74.4	+0.1	+3.7	62.7	62.6	59.4	+0.1	+3.3	11.1	11.0	10.8	+0.1	+0.3
Health Services	90.4	90.7	85.2	-0.3	+5.2	59.7	59.8	55.8	-0.1	+3.9	19.1	19.3	18.2	-0.2	+0.9
Other Services	153.4	152.9	147.0	+0.5	+6.4	98.7	98.4	95.5	+0.3	+3.2	30.9	30.7	28.6	+0.2	+2.3
Government	251.4	251.1	238.5	+0.3	+12.9	131.1	131.3	122.6	-0.2	+8.5	53.4	53.3	51.0	+0.1	+2.4
Federal	42.6	42.4	42.5	+0.2	+0.1										
State and Local	208.8	208.7	196.0	+0.1	+12.8										
School	123.9	124.3	115.2	-0.4	+8.7										

* Preliminary
** Labor force, unemployment, and employment are reported by place of residence.
*** Normal seasonal variations have been eliminated to reflect underlying economic trends.
NOTE Prepared in cooperation with the U.S. Department of Labor, Bureau of Labor Statistics.

-- Prepared by Arizona Department of Economic Security,Research Administration (CPS, 1/88)

Nonmetropolitan Counties
Labor Force and Employment
April 1988

	Apache	Cochise	Coconino	Gila	Graham	Greenlee	La Paz
CIVILIAN LABOR FORCE*	14,775	34,500	41,650	12,275	7,925	3,050	5,000
Total Unemployment	2,050	2,825	2,500	1,400	725	325	350
Rate	13.9%	8.2%	6.0%	11.4%	9.1%	10.7%	7.0%
Rate (Seas. Adj.)**	15.5%	8.2%	6.6%	11.3%	9.3%	11.0%	7.6%
Total Employment	12,725	31,675	39,150	10,875	7,200	2,725	4,650

THE ABOVE LABOR FORCE STATISTICS SHOULD NOT BE USED FOR ECONOMIC ASSISTANCE PROGRAMS

	Apache	Cochise	Coconino	Gila	Graham	Greenlee	La Paz
TOTAL WAGE AND SALARY	15,500	25,150	39,175	10,475	5,150	2,950	3,250
Manufacturing	825	1,125	2,825	1,325	200	75	225
Mining & Quarrying	25	100	150	1,350	0	1,600	50
Construction	875	1,150	1,575	600	175	250	125
T.C.P.U.	2,225	1,575	3,025	400	150	50	75
Trade	1,525	5,475	8,925	2,325	1,475	225	1,050
F.I.R.E.	350	650	825	275	125	25	100
Services & Misc.	4,625	4,500	10,150	1,625	875	125	825
Government	5,050	10,575	11,700	2,575	2,150	600	800

	Mohave	Navajo	Pinal	Santa Cruz	Yavapai	Yuma
CIVILIAN LABOR FORCE*	30,575	25,850	37,875	9,650	35,100	48,125
Total Unemployment	1,850	2,700	3,125	750	2,075	8,650
Rate	6.1%	10.4%	8.3%	7.8%	5.9%	18.0%
Rate (Seas. Adj.)**	6.1%	11.1%	8.4%	10.0%	6.5%	17.7%
Total Employment	28,725	23,150	34,750	8,900	33,025	39,475

THE ABOVE LABOR FORCE STATISTICS SHOULD NOT BE USED FOR ECONOMIC ASSISTANCE PROGRAMS

	Mohave	Navajo	Pinal	Santa Cruz	Yavapai	Yuma
TOTAL WAGE AND SALARY	22,050	20,175	30,900	9,600	24,275	27,150
Manufacturing	2,950	1,825	3,550	1,200	2,300	1,625
Mining & Quarrying	325	1,225	3,825	0	725	100
Construction	1,600	1,050	1,450	300	2,050	1,425
T.C.P.U.	1,200	1,800	1,250	575	850	1,250
Trade	6,125	4,000	5,550	4,200	6,525	8,300
F.I.R.E.	1,000	400	825	425	1,025	975
Services & Misc.	4,975	4,525	4,550	1,375	5,275	6,275
Government	3,875	5,350	9,900	1,525	5,525	7,200

* Adjusted to the Current Population Survey (CPS) to reflect place of residence.

** Seasonal adjustment not applicable for economic assistance programs.

T.C.P.U. = Transportation, Communications, and Public Utilities
F.I.R.E. = Finance, Insurance, and Real Estate

Prepared in conjunction with the U.S. Department of Labor, Bureau of Labor Statistics.

Arizona Labor Force and Employment for Economic Assistance Programs
April 1988

County	Civilian Labor Force	Employment	Unemployment	Rate
Statewide	1,632,097	1,543,656	88,441	5.4%
Apache	14,791	12,729	2,062	13.9
Cochise	34,516	31,679	2,837	8.2
Coconino	41,635	39,143	2,492	6.0
Gila	12,286	10,881	1,405	11.4
Graham	7,932	7,205	727	9.2
Greenlee	3,042	2,723	319	10.5
La Paz	4,990	4,638	352	7.1
Maricopa	1,013,071	968,069	45,002	4.4
Mohave	30,583	28,735	1,848	6.0
Navajo	25,844	23,146	2,698	10.4
Pima	312,647	298,536	14,111	4.5
Pinal	37,884	34,756	3,128	8.3
Santa Cruz	9,657	8,908	749	7.8
Yavapai	35,105	33,036	2,069	5.9
Yuma	48,114	39,472	8,642	18.0

These figures are the only official BLS labor statistics to be used for revenue sharing purposes. They are not designed to be used as economic indicators.

NOTE: Series for Yuma and La Paz counties start January 1983. Data are not comparable to any past series.

Arizona Unemployment Insurance Activities
March 1988

	March 1988	February 1988	March 1987	% Change From One Year Ago
Claimants Served*	32,112	30,875	33,289	-3.5%
Avg. Weeks Unemployed**	8.7	8.2	9.3	-6.4%
Benefits Paid*	$13,067,323	$11,030,411	$12,351,264	5.8%
Trust Fund Balance	$419,860,962	$421,045,357	$379,023,515	10.8%

*All Programs **UI Only

Estimated Hours and Earnings of Production Workers in Selected Industries
Arizona

INDUSTRY	AVERAGE WEEKLY EARNINGS			AVERAGE WEEKLY HOURS			AVERAGE HOURLY EARNINGS		
	Apr.* 1988	Mar. 1988	Apr. 1987	Apr.* 1988	Mar. 1988	Apr. 1987	Apr.* 1988	Mar. 1988	Apr. 1987
Manufacturing	402.62	402.37	397.20	41.0	41.1	40.0	9.82	9.79	9.93
Aircraft & Missiles	INA	INA	509.64	INA	INA	41.2	INA	INA	12.37
Food & Kindred Prod.	364.81	353.23	405.77	40.4	39.6	42.4	9.03	8.92	9.57
Primary Metals	477.94	472.20	466.34	38.7	38.8	38.1	12.35	12.17	12.24
Machinery	400.88	401.44	374.30	41.2	41.6	39.4	9.73	9.65	9.50
Copper Mining	524.02	525.34	500.61	42.5	42.4	40.7	12.33	12.39	12.30
Construction	429.60	432.89	433.64	36.5	36.5	37.0	11.77	11.86	11.72
Utilities	640.50	632.10	615.76	42.7	42.0	43.0	15.00	15.05	14.32
Retail Trade**	244.53	246.75	243.29	33.0	32.9	32.7	7.41	7.50	7.44
Wholesale Trade	401.15	390.66	382.39	39.6	39.5	39.3	10.13	9.89	9.73

Estimated Hours and Earnings of Production Workers in Selected Industries
Maricopa County

INDUSTRY	AVERAGE WEEKLY EARNINGS			AVERAGE WEEKLY HOURS			AVERAGE HOURLY EARNINGS		
	Apr.* 1988	Mar. 1988	Apr. 1987	Apr.* 1988	Mar. 1988	Apr. 1987	Apr.* 1988	Mar. 1988	Apr. 1987
Manufacturing	433.26	429.73	422.91	41.7	41.4	40.9	10.39	10.38	10.34
Construction	447.12	453.36	439.30	36.8	37.1	36.7	12.15	12.22	11.97
Retail Trade**	271.62	269.01	271.15	33.7	33.5	33.6	8.06	8.03	8.07
Wholesale Trade	407.88	400.18	387.44	39.6	39.7	38.9	10.30	10.08	9.96

Estimated Hours and Earnings of Production Workers in Selected Industries
Pima County

INDUSTRY	AVERAGE WEEKLY EARNINGS			AVERAGE WEEKLY HOURS			AVERAGE HOURLY EARNINGS		
	Apr.* 1988	Mar. 1988	Apr. 1987	Apr.* 1988	Mar. 1988	Apr. 1987	Apr.* 1988	Mar. 1988	Apr. 1987
Manufacturing	373.80	370.33	344.58	39.1	38.9	37.7	9.56	9.52	9.14
Copper Mining	544.42	549.54	505.41	42.8	43.0	42.4	12.72	12.78	11.92
Construction	398.04	379.14	372.88	37.2	35.6	37.4	10.70	10.65	9.97
Utilities	580.98	574.56	535.82	42.1	42.0	40.5	13.80	13.68	13.23

* Preliminary.
** Excludes eating and drinking places.

NOTE: These estimates are based on a sample of full- and part-time production and related employees whose payroll and hours are reported for the pay period which includes the 12th of the month. Prepared in cooperation with the U.S. Department of Labor, Bureau of Labor Statistics.

Rebasing of the CPI

The U. S. Bureau of Labor Statistics (BLS) has changed the base period of the Consumer Price Index (CPI) to 1982-84 = 100 (from 1967 = 100), starting with the January 1988 release. The conversion of the base period changes only the value of the index. It does not affect the percent change between periods of time except in the case of small rounding differences. The three-year base period has been calculated such that, for all categories within the index, the average of the three years equals 100.

The 1982-1984 period was selected to coincide with updated expenditure weights, which are based on data tabulated from the Consumer Expenditure Survey for 1982, 1983, and 1984. Another advantage of the three-year base period is that it more fully encompasses a complete business cycle. The last previous rebasing of CPI data occurred in February 1971, when the 1967 base was substituted for the former 1957-59 base.

Periodically, BLS makes revisions to the CPI. This year, in addition to the rebasing, other components of the CPI were updated. (See the August 1987 issue of this Newsletter for a complete description of these updates.)

BLS does not prepare indexes for Arizona or its cities; however, the Metropolitan Phoenix CPI prepared by Arizona State University and the Metropolitan Tucson CPI prepared by the University of Arizona have also been rebased to the 1982-84 period.

The following tables show some of the rebased CPI data for Phoenix, Tucson, and the United States.

Rosemary Reardon and
Barbara Keene

METROPOLITAN PHOENIX CONSUMER PRICE INDEX
ALL ITEMS
(1982-84 = 100)

	1st Qtr.	2nd Qtr.	3rd Qtr.	4th Qtr.	Annual Average
1975	49.3	50.1	51.2	52.5	50.8
1976	52.5	53.0	53.9	54.6	53.5
1977	55.7	57.0	58.2	59.3	57.5
1978	60.6	62.5	64.3	66.1	63.3
1979	68.2	71.8	73.8	76.5	72.6
1980	81.8	81.9	84.0	86.7	83.6
1981	89.4	91.1	93.2	95.2	92.2
1982	96.7	97.2	98.2	96.2	97.1
1983	96.4	98.1	99.7	100.2	98.6
1984	102.1	103.6	105.4	106.1	104.3
1985	108.1	109.8	110.1	110.2	109.6
1986	110.2	110.8	111.4	111.4	111.0
1987	113.9	115.5	116.1	116.6	115.5
1988	117.4				

SOURCE: Arizona State University, Center for Business Research, in co-sponsorship with Valley National Bank.

METROPOLITAN TUCSON CONSUMER PRICE INDEX
ALL ITEMS
(1982-84 = 100)

	1st Qtr.	2nd Qtr.	3rd Qtr.	4th Qtr.	Annual Average
1983	98.2	99.7	101.0	101.2	100.0
1984	104.1	104.0	106.1	107.4	105.4
1985	111.1	112.6	112.3	112.9	112.2
1986	113.6	113.8	114.2	114.2	114.0
1987	117.3	118.7	119.4	120.4	119.0
1988	120.8				

SOURCE: University of Arizona, Division of Economic and Business Research, in co-sponsorship with First Interstate Bank of Arizona.

U.S. CONSUMER PRICE INDEX
ALL URBAN CONSUMERS
ALL ITEMS

	Jan.	Mar.	June	Sep.	Dec.	Annual Average
1967	32.9	33.0	33.3	33.6	33.9	33.4
1968	34.1	34.3	34.7	35.1	35.5	34.8
1969	35.6	36.1	36.6	37.1	37.7	36.7
1970	37.8	38.2	38.8	39.2	39.8	38.8
1971	39.8	40.0	40.6	40.8	41.1	40.5
1972	41.1	41.4	41.7	42.1	42.5	41.8
1973	42.6	43.3	44.2	45.2	46.2	44.4
1974	46.6	47.8	49.0	50.6	51.9	49.3
1975	52.1	52.7	53.6	54.6	55.5	53.8
1976	55.6	55.9	56.8	57.6	58.2	56.9
1977	58.5	59.5	60.7	61.4	62.1	60.6
1978	62.5	63.4	65.2	66.5	67.7	65.2
1979	68.3	69.8	72.3	74.6	76.7	72.6
1980	77.8	80.1	82.7	84.0	86.3	82.4
1981	87.0	88.5	90.6	93.2	94.0	90.9
1982	94.3	94.5	97.0	97.9	97.6	96.5
1983	97.8	97.9	99.5	100.7	101.3	99.6
1984	101.9	102.6	103.7	105.0	105.3	103.9
1985	105.5	106.4	107.6	108.3	109.3	107.6
1986	109.6	108.8	109.5	110.2	110.5	109.6
1987	111.2	112.1	113.5	115.0	115.4	113.6
1988	115.7	116.5				

SOURCE: U.S. Department of Labor, Bureau of Labor Statistics.

New Developments

"New Developments" is featured each month as a service to employers and job seekers. It is a compilation of public announcements of the more significant new construction, grand openings, major hirings and layoffs, and other employer events that have special significance for Arizona labor markets. The announcements are paraphrased and otherwise edited from articles published in newspapers and other periodicals from throughout the state. "New Developments" is limited to space available, and no attempt is made to compile an exhaustive list of all such events that have occurred during the month.

COMMUNICATIONS - Vodavi Technology Corp. will be closing a Georgia facility and adding 60 workers to its Scottsdale headquarters. The firm is a designer and marketer of telecommunications equipment. The actions were prompted by recent mergers with ISOTEC Communications Inc. and Executone.

MANUFACTURING - The McKesson Corp. will be building a distribution center on 150 acres in the Estrella development near Goodyear. As the first of a new generation of hub distribution centers, the company's largest center will handle drugs and general merchandise.

The Communications Systems Division of the Unisys Corp. has awarded a $2 million contract to EFData Corp. of Tempe. The contract includes the engineering and manufacture of the adaptive tropscatter data modems used in the U.S. government's AN/TRC-170 Tropscatter Communications System.

The Boeing Commercial Airplane Co. has awarded a $3.5 million contract to the Arizona Division of Aircraft Gear Corp of Chandler. Aircraft Gear will be producing gears, gear shafts, housings, and other components for Boeing 757 and 767 commercial aircraft.

Mulay Plastics Co. of Addison, Illinois, will be opening a manufacturing plant in Casa Grande. The company, which makes plastic housings for televisions, computers, and other products, will begin operations with 35 to 40 employees and expand to 200 to 250 within three years. Located at 1201 West Jefferson Street, the 90,000-square-foot plant should be in operation by July 1, 1988.

CONSTRUCTION and DEVELOPMENT - Construction will begin soon on single-family homes at Marshal Ranch, a 170-acre mixed-use community at 59th Avenue and Cactus in Glendale. The $45 million development will include 642 residential units, offices, and day care and health club services. The homes will be priced in the mid to upper price range. Build-out is planned over the next five years.

The following projects are being planned for the area around Central and Baseline in south Phoenix:

- Plans for a $50-to-$75 million Jesse Owens Memorial Hospital Campus include a 128-bed skilled nursing facility, a 150-bed congregate-care center, a rehabilitation hospital, outpatient services, a 150-bed community hospital, and a branch bank. Already located at the campus is the Jesse Owens Memorial Medical Center, built in 1979 at 325 East Baseline Road.

- Being developed across Baseline Road from the medical campus, Southgate Center will include $38 million of retail, office, apartments, and retirement-housing projects. Construction will start late this year on a 99,000-square-foot retail center anchored by a movie theater and an appliance/electronics store.

- A specialty retail and office development is planned for an area bordering the medical campus.
- Smitty's has plans to build a 58,700-square-foot store with an additional 56,000 square feet of retail space this year.
- Also being built in the area is a 104,000-square-foot retail center anchored by Fry's and Walgreens.
- A $4.9 million, five-lane parkway, the Jesse Owens Parkway, will also be built.

Five additional home builders have started construction projects at Val Vista Lakes in Gilbert.

- Cardon Homes is building Anchor Point (107 single-family homes priced from the $80,000s) and Vista Shores (93 homes priced from the low $100,000s).
- Gibson & Gibson is developing Hidden Cove (95 garden homes priced from the $110,000s).
- Inman Homes is building Mission Bay Estates (73 single-family homes).
- L.J. Hooker Homes has already opened its models at The Enclave (54 single-family homes priced from $115,000).
- Ryland Homes is building The Landing (79 single-family homes priced from the $90,000s).

The Phoenix City Council has approved a $10 million plan to turn Central Avenue between McDowell and Camelback roads into a boulevard lined with palm and shade trees and wide granite sidewalks in Southwestern colors and designs. Also included will be distinctive light poles and benches along the sidewalks. Work should begin in June and be completed by September 1989.

Pioneer Homes is developing a 128-lot, single-family home subdivision at the northeast corner of Southern and Higley roads in Mesa. Models ranging in price from the high $70,000s to $100,000 should be open in June.

Construction is under way on Rose Garden Lane Business Park, a 71,000-square-foot project in Deer Valley. Located at the southeast corner of Rose Garden Lane and 20th Avenue, the business park will include three office/warehouse buildings. Completion is expected in August.

Phoenix voters have approved bond propositions totaling about $1 billion. Projects covered by the bond election include the following:

- A new Arizona Museum of Science and Technology, a history museum, and a parking garage will be built during the next three years near Seventh and Washington streets.
- A new library will be built a few blocks south of the existing Central Library at Central Avenue and McDowell Road by 1992.
- The Phoenix Art Museum will expand in 1991 and the Phoenix Little Theater three years later.
- Rental housing will be built or converted for low-income families and senior citizens within two or three years.
- A $21 million international terminal at Sky Harbor International Airport will be completed in about three years. Construction on an additional concourse at Terminal 3 will begin in two years. New hangars for private planes at Phoenix Deer Valley and

Goodyear airports should be completed in 1992.

- The downtown Palace West/Orpheum Theatre will be renovated as a multipurpose facility in 1991 for lectures, concerts, and other community events.
- An indoor aquatic facility at Cave Creek Park will open in about three years.

RETAIL TRADE - Six of 11 Hansen's Quality Foods stores in the Phoenix area were closed as the company filed for protection from creditors under Chapter 11 of the U.S. Bankruptcy Act. About 50 employees have lost their jobs.

The Tempe City Council has approved plans for Mission Centre, a five-story mall to be built on the eastern side of Mill Avenue between Fourth and Second streets. The project will include 75,000 square feet of retail space, 47,000 square feet of office space, and a 1,171-space parking garage. The parking garage should be operating in about a year.

Work has begun on Falcon View Shopping Center at the southwest corner of McKellips and Recker roads in Mesa. The 215,000-square-foot center will include a K-Mart store, a Fry's Food Store, a Goodyear Tire Center, and seven pad sites for fast food and service users.

Ground has been broken on Santa Fe Village in Mesa. The $6 million center, located at the northwest corner of Baseline and Gilbert, will include a multiplex theater facility, Big O Tires, and tentatively a major bank. Construction is expected to take six months.

Chili's Inc. of Dallas has opened its second restaurant in the Valley at 2057 East Camelback. The company is looking at additional Valley sites to open next year. Employing about 90 in each location, the restaurants specialize in burgers, fajitas, and ribs.

HOTELS - Construction has started on a 262-room Hilton Hotel at the Phoenix Airport Center. The hotel, located at the northeast corner of University Drive and the Hohokam Expressway, is expected to open in February of 1989.

TRANSPORTATION - A 7,000-foot runway will be added to the Chandler Municipal Airport. The new runway will run parallel to an existing 4,400-foot runway and is expected to attract corporate-jet traffic. The U.S. Department of Transportation awarded a $3 million grant through the Federal Aviation Administration to cover the cost.

AMUSEMENT - Construction is scheduled to begin by the end of the year on The Arizona Territory, a major theme entertainment park to be built on 1,500 acres of agricultural land on the north side of Grand Avenue at 163rd Avenue in the Valley. The $500 million entertainment campus is expected to employ about 2,000 people and be a major draw for Arizona residents and tourists.

The theme park will include five areas, each with its own theme, rides, demonstrations, and exhibits. The areas will be Saddle Junction, Canyon Country, Mexico Viejo, Memory Lane, and Data World. In addition to the theme park will be a resort conference center, public recreation areas, a 200-acre RV park, golf courses, an 80-acre dude ranch, and a shopping area.

Tigerville U.S.A., a seven-acre domain for tigers and other large cats, will open the first part of 1989 as part of Scottsdale's Horse World, a 356-acre park and equestrian facility being developed east of Pima Road along the Central Arizona Project.

Arizona Labor Market Newsletter
LABOR MARKET INFORMATION PUBLICATIONS
Site Code 733A
P.O. Box 6123
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8/10/88 50465-1

ARIZONA LABOR MARKET INFORMATION NEWSLETTER

Vol. XII No. 7
July 1988

Unemployment Rate

Seasonally Adjusted
May*

ARIZONA	5.8%
Maricopa County	4.7%
Pima County	4.9%
UNITED STATES	5.6%

Consumer Price Index

U.S. - April 1988
Base = 1982-84

Wage Earner/Clerical Worker -	115.7
% Chg. Year Ago	3.7
All Urban -	117.1
% Chg. Year Ago	3.9

Phoenix - 1st Qtr 1988
Base = 1982-84

All Urban -	117.4
% Chg. Year Ago	3.1

Tucson - 1st Qtr 1988
Base = 1982-84

All Urban -	120.8
% Chg. Yr. Ago	3.0

*Preliminary

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Arizona Department of Economic Security
— Moving People Toward Self-Sufficiency

1987 Per Capita Personal Income

With per capita personal income of $14,030, Arizona ranked 29th among all states in 1987, according to the U.S. Bureau of Economic Analysis. This was Arizona's first drop in rank since 1981 when the state placed 34th and then climbed to 26th place by 1986. In 1987, Connecticut maintained its first-place rank for the second consecutive year with per capita personal income of $20,980, well above second ranked New Jersey with $20,067. Mississippi had the lowest per capita personal income with $10,204, less than half of Connecticut's level.

Among the states in the Southwest, Far West, and Rocky Mountain regions, only California, Nevada, Colorado, and Washington posted per capita personal income figures greater than Arizona's in 1987. As recently as 1983, Arizona only ranked higher than New Mexico, Idaho, Montana, and Utah when compared to other western states. Since then, Arizona has eclipsed Texas, Wyoming, and Oregon. Consensus forecasts indicate that earnings growth in Arizona is anticipated to exceed growth in Colorado and California in 1988 and 1989; but, because per capita personal income for these states is much greater, it is unlikely that Arizona will pass them in rank.

In terms of the growth of per capita personal income, Arizona was 42nd, ahead of only New Mexico, Oklahoma, Texas, Utah, Wyoming, Alaska, Arkansas, and Louisiana. Arizona tallied a 2.9 percent growth rate, while the national average was 4.8 percent. In 1986, the state's growth was slightly above the national average, 5.3 percent compared to 5.2 percent. Only five states had stronger growth in 1985 as Arizona grew at a 7.2 percent clip.

This slowdown in growth is not unusual in comparison to other states. Slower rates of per capita personal income growth were registered by 37 states in 1987. The deceleration in growth occurred in all areas of the country. Most of the dropoff was attributed to slowdowns in earnings growth in finance, retail trade, services, and construction. In Arizona, the slowdown was primarily the result of the large decline in construction earnings; nevertheless, earnings growth was languid in all industries.

While the slowdown of the rate of growth is of some concern, the fact that Arizona per capita personal income as a percent of the national average has fallen is more important, particularly if it is an indication that Arizona's standard of living is declining relative to other states. Arizona's per capita personal income has continually been below the national average. As a percent of the national, the state peaked at 95 percent in 1971 and 1972 and fell to a low of 88 percent in 1977.

Rosemary Reardon

DEFINITIONS:

Personal income is income received by persons from all sources, including production, government and business transfer payments, and government interest. Personal income is the sum of earnings (wage and salary disbursements, other labor income, and proprietors' income), rental income, dividends, interest, and transfer payments less personal contributions for social insurance. Personal income is measured before the deduction of income taxes and is reported in current dollars (no adjustment is made for price changes).

Per capita personal income is the annual total personal income of residents divided by resident population as of July 1.

PER CAPITA PERSONAL INCOME--1987

Rank		Income	% of U.S. Average	Rank		Income	% of U.S. Average
1	Connecticut	$20,980	137	26	Iowa	$14,191	93
2	New Jersey	20,067	131	27	Georgia	14,098	92
3	Massachusetts	18,929	123	28	Vermont	14,061	92
4	New York	18,055	118	29	ARIZONA	14,030	91
5	Alaska	17,886	117	30	Oregon	13,887	91
6	Maryland	17,722	116	31	Indiana	13,834	90
7	California	17,661	115	32	Texas	13,764	90
8	New Hampshire	17,133	112	33	Maine	13,720	89
9	Illinois	16,347	107	34	North Carolina	13,155	86
10	Virginia	16,322	106	35	North Dakota	13,061	85
11	Delaware	16,238	106	36	Wyoming	12,759	83
12	Nevada	15,958	104	37	Tennessee	12,738	83
13	Colorado	15,862	103	38	Oklahoma	12,520	82
14	Minnesota	15,783	103	39	South Dakota	12,511	82
15	Washington	15,444	101	40	Montana	12,255	80
16	Hawaii	15,366	100	41	Kentucky	11,950	78
17	Rhode Island	15,355	100	42	South Carolina	11,858	77
--	UNITED STATES	15,340	100	43	Idaho	11,820	77
18	Michigan	15,330	100	44	Alabama	11,780	77
19	Florida	15,241	99	45	New Mexico	11,673	76
20	Pennsylvania	14,997	98	46	Louisiana	11,362	74
21	Kansas	14,952	97	47	Arkansas	11,343	74
22	Wisconsin	14,659	96	48	Utah	11,246	73
23	Ohio	14,543	95	49	West Virginia	10,959	71
24	Missouri	14,537	95	50	Mississippi	10,204	67
25	Nebraska	14,341	93				

ARIZONA'S PER CAPITA PERSONAL INCOME

	Income	Percent Change	% of U.S. Average	Rank
1987	$14,030	2.9	91	29
1986	13,640	5.3	93	26
1985	12,951	7.2	93	27
1984	12,077	---	92	28

SOURCE: U.S. Department of Commerce, Bureau of Economic Analysis.

The 1988 MICRO OIS of Arizona

The Occupational Information System (OIS) of Arizona has released the 1988 version of its microcomputer database--the MICRO OIS. The OIS project is designed to serve vocational planners, administrators, and evaluators; career counselors; and others. Several new modules were added to the MICRO OIS this year, and additional ones are planned for next year. Modules now included or planned for implementation in the MICRO OIS during the next year are:

- The Interest Inventory module incorporates the United States Employment Service (USES) Interest Inventory, which may be taken directly on the computer or on paper. After entering raw scores, the computer prints out an evaluation for the client.
- The SOC Career Profile module provides one-page printouts for about 750 occupations based on Standard Occupational Classification (SOC) codes.
- The Supply-Demand module provides information relating to the labor market. These printouts may be prepared for any county or statewide. Demand and training information is grouped into 228 clusters for easy retrieval. The four parts of the supply-demand printout are: (a) employment forecast data, (b) training completer data from secondary schools, four-year colleges, community colleges, private schools, and community-based organizations, (c) Unemployment Insurance, Job Service, and apprenticeship data, and (d) wage survey data.
- The selected Search module produces lists at the county or statewide level relating to largest occupations, training areas having the most completers, occupations of Job Service placements having the highest wage, or other criteria. Coverage is for the latest full calendar or school year.
- The Job Match module permits individuals to rate themselves on the basis of 16 characteristics and to state educational level objectives. These responses are then evaluated against a list of 280 occupations, and the 25 occupations which match most closely are printed out.
- The Vocational Evaluation module permits entry of client information including General Education Development (GED) codes, aptitudes, temperaments, interests, training time, physical demands, and work environments. It scans more than 12,000 Dictionary of Occupational Titles (DOT) codes and lists occupations that have these characteristics. A planned modification will permit use in skill transferability, which is useful in working with displaced workers.
- The Occupational Characteristics module permits entry of a more limited range of information about an individual including GED codes, aptitudes, training time, and limited information on physical demands and work environment. It then searches through 750 SOC codes and selects occupations which match the entered criteria.
- The Plant Impact module is designed to assess the training needs of a new plant. Given the number of people to be employed and the two-digit Standard Industrial Classification (SIC) code, the module will print a list of occupations and number of employees in each occupation that might be expected to be employed.

INFORMATION AVAILABLE IN THE MICRO OIS*

		Available Statewide	Available by County
1988	Estimated Employment**	Yes	Yes
1992	Projected Employment**	Yes	Yes
1988-92	Annual Replacement Demand**	Yes	Yes
1988-92	Annual Growth Demand**	Yes	Yes
1988-92	Annual Job Openings**	Yes	Yes
1986-87	Public Secondary Enrollments/Completers	Yes	Yes
1986-87	Proprietary Completers	Yes	Yes
1986-87	Community-based Organization Completers	Yes	Yes
1986-87	Degrees and Certificates--Three Years and Less	Yes	Yes
1986-87	Degrees--Four Years and More	Yes	Yes
1987	Job Training Partnership Act	No	No
1987	Job Service Job Openings	Yes	Yes
1987	Job Service Openings/Applicants Ratio	Yes	Yes
1987	Job Service Average Wage for Placements	Yes	Yes
1987	Unemployment Insurance Claimants	Yes	Yes
1987	Apprenticeship Completers	Yes	Yes
1987	Small Employer Wage Survey Data--Maricopa, Pima	No	Yes
1987	Large Employer Wage Survey Data--Maricopa, Pima, and Balance of State	Yes	Yes

* Employment and demand data are by occupation based on the Occupational Employment Statistics (OES) code; education and training data by vocational training area based on the Classification of Instructional Programs (CIP) code; and Job Service, Unemployment Insurance, and Apprenticeship data by occupation based on the Dictionary of Occupational Titles (DOT) code.

** Includes self-employment.

- The School Listings module lists institutions that offer training by Classification of Instructional Programs code in a given county. The institutions include secondary school districts, community colleges, four-year colleges, private schools, and community-based organizations.
- The Occupation-Industry module permits entry of an Occupational Employment Statistics (OES) code and prints out the percent distribution of employment across two-digit SIC classifications.
- The GATB Evalution module uses raw General Aptitude Test Battery scores to prepare a printout integrated with the USES Interest Inventory which shows an individual's Occupational Aptitude Pattern (OAP) levels.

The MICRO OIS is currently installed at over 50 sites in Arizona. It is designed as a stand-alone system that runs on IBM-compatible microcomputers with at least 13 megabytes of hard disk space and dBASEIII+ software. The MICRO OIS, along with installation and training, is available at no cost to secondary schools and other nonprofit organizations in Arizona.

Besides the MICRO OIS, there are two other components to the OIS project. The OIS Users' Manual is used in vocational planning and evaluation and career counseling. Designed for use with either the MICRO OIS or the OIS Users' Manual is a series of OIS hard-copy reports of supply-demand and other information as listed in the accompanying table.

The OIS project is mandated by the Job Training Partnership Act and the Carl Perkins Act. The MICRO OIS project was developed by the National Occupational Information Coordinating Committee. Funding for the OIS in Arizona has been provided primarily by Vocational Education in the Arizona Department of Education, but also by the Arizona State Occupational Information Coordinating Committee (ASOICC) and the DES Research Administration. Development and implementation are being carried out through ASOICC. For further information, contact Hugo H. Soll, Ph.D., Manager, OIS of Arizona, Site Code 733A, P. O. Box 6123, Phoenix, Arizona 85005, (602) 255-3680.

Hugo H. Soll, Ph.D.

OIS Releases New Job Service Reports

The Occupational Information System (OIS) of Arizona has just released reports covering applicants and openings listed with the Job Service in 1987. The following reports are arranged in Dictionary of Occupational Titles (DOT) code sequence.

- OIS Report 88-7-ST: 1987 Job Service Data--Statewide.
- OIS Report 88-7-MP: 1987 Job Service Data--Maricopa and Pima Counties.
- OIS Report 88-7-BOS: 1987 Job Service Data--All Counties Except Maricopa and Pima.

The related Standard Occupational Classification (SOC) code and OIS cluster code are included for each DOT occupation. Using these codes, additional information may be obtained through the MICRO OIS. A one-page career profile printout may be obtained for the SOC occupation which includes the specified DOT occupation. In addition, a supply-demand report may be obtained for the OIS cluster which includes the specified DOT code.

For further information, contact Hugo H. Soll, Ph.D., Manager, OIS of Arizona, Site Code 733A, P.O. Box 6123, Phoenix, Arizona 85005, (602) 255-3680.

Hugo H. Soll, Ph.D.

LMI Publications-- Hot off the Press

The following recently revised publication prepared by the DES Research Administration can be ordered from the address on the back of this newsletter or by calling (602) 255-3871. One copy will be sent at no charge. Multiple copies are available at a nominal charge to help cover the cost of printing. Other DES offices can order directly from DES Supply.

The latest edition of Job Bank Wages includes hourly wage rates (low, average, and high) that were offered to applicants placed in jobs through the Arizona Department of Economic Security's Job Service Job Bank in 1987. The data are listed alphabetically by occupation in occupational categories and arranged geographically by statewide, county, and city. Since many of those job seekers were entering the labor force for the first time, this publication is a good source of entry-level wage data. This book is also one of the few sources for wage data in the nonmetropolitan areas of the state.

The Arizona Labor Force in May

The ranks of the unemployed in Arizona swelled by 4,800 in May, pushing the unemployment rate up to 5.8 percent. Most of the increase in unemployment was the result of the seasonal downturn in agriculture and students entering the job market at the close of the school year. The U.S. unemployment rate jumped to 5.6 percent as a result of the influx of students looking for temporary jobs or permanent positions after graduation.

May was a balancing act between seasonal forces which resulted in a decline of 1,900 in wage and salary employment. Anticipated seasonal downturns appeared in tourist-related services employment as the remaining winter visitors left the state. Seasonal downturns were also apparent in school employment as the school year wound down. Offsetting these dips, construction revealed its summer employment spurt; however, the increase was smaller than usual.

Services employment, plagued by seasonal drops, fell by 2,000 during May. The fall was dominated by the loss of 700 jobs in the hotel and lodging industry, a consequence of the conclusion of the tourism season. Health services realized its first decline in over a year losing 300 jobs, and the sector classified as "other services" plunged by 1,400, the largest decline since the summer of 1986. Business services again displayed healthy growth, adding 400 new employees.

School employment dropped by 300 in May, beginning the annual summer retrenchment which should continue through July. Despite the decline in school employment, government employment enjoyed continued growth with an increase of 700 workers.

Construction employment surged by 800 in May. This gain creates the illusion that the industry has reached a recovery phase, but this is not the case. Gains in construction employment during the summer months are typical, even during economic downturns. The addition of 800 workers is subpar when compared to previous years. The average April-to-May increase over the last ten years is 1,300. Construction employment should continue to show gains through next month before fading again. No turnaround is in sight for the industry before next year.

Boosted by the addition of 400 jobs, the manufacturing industry sustained a fourth consecutive month of growth. One thousand manufacturing jobs have been added to the state's economy since January, but over-the-year growth in this sector is a modest 1.3 percent. Stronger growth is anticipated later in the year in spite of continued layoffs in the troubled aircraft and missiles industry.

The transportation, communications, and public utilities industry shrank by 1,000 as a result of seasonal and economic layoffs in the public utilities sector. The finance, insurance, and real estate industry continued its downturn, losing another 600 jobs in May. Unfortunately, these declines cannot be attributed to seasonal factors but are a continuation of a trend which began last summer. This sector is not expected to rebound until the construction industry recovers.

The coming months call for continued slow growth in jobs and slightly higher unemployment rates. Employment gains in healthy industries, such as services and trade, will be offset by losses in the ailing construction and aerospace industries.

Rosemary Reardon

Arizona Labor Force and Employment

Arizona Labor Force and Employment

May 1988 (in thousands)

	ARIZONA					MARICOPA COUNTY					PIMA COUNTY				
				Amt Change					Amt Change					Amt Change	
	May.* 1988	Apr. 1988	May. 1987	Apr. to May.	1987 to 1988	May.* 1988	Apr. 1988	May. 1987	Apr. to May.	1987 to 1988	May.* 1988	Apr. 1988	May. 1987	Apr. to May.	1987 to 1988
TOTAL CIVILIAN LABOR FORCE**	1628.6	1635.7	1620.0	-7.1	+8.6	1012.7	1015.2	1005.7	-2.5	+7.0	310.4	313.0	307.8	-2.6	+2.6
Total Unemployment	94.0	89.2	101.2	+4.8	-7.2	46.6	45.4	52.0	+1.2	-5.4	14.7	14.3	14.7	+0.4	+0.0
Rate	5.8	5.5	6.2	---	---	4.6	4.5	5.2	---	---	4.7	4.6	4.8	---	---
Rate (Sea. Adj.)***	5.8	5.6	6.4	---	---	4.7	4.6	5.3	---	---	4.9	4.7	5.0	---	---
Total Employment	1534.6	1546.5	1518.8	-11.9	+15.8	966.1	969.8	953.7	-3.7	+12.4	295.7	298.7	293.1	-3.0	+2.6

The Above Labor Force Statistics Should Not Be used for Economic Assistance Programs

NONAGRICULTURAL WAGE AND SALARY EMPLOYMENT BY PLACE OF WORK

	ARIZONA					MARICOPA COUNTY					PIMA COUNTY				
	May.* 1988	Apr. 1988	May. 1987	Apr. to May.	1987 to 1988	May.* 1988	Apr. 1988	May. 1987	Apr. to May.	1987 to 1988	May.* 1988	Apr. 1988	May. 1987	Apr. to May.	1987 to 1988
TOTAL WAGE AND SALARY	1421.3	1423.2	1389.6	-1.9	+31.7	936.0	935.8	914.2	+0.2	+21.8	250.2	251.5	245.4	-1.3	+4.8
Manufacturing	188.7	188.3	186.2	+0.4	+2.5	138.2	137.5	134.7	+0.7	+3.5	30.3	30.7	31.1	-0.4	-0.8
Durable Goods	146.0	145.9	145.5	+0.1	+0.5	107.7	107.3	106.2	+0.4	+1.5	24.6	25.1	25.6	-0.5	-1.0
Stone, Clay and Glass	7.5	7.5	8.1	+0.0	-0.6	4.8	4.8	5.4	+0.0	-0.6					
Primary and Fabricated Metals	15.9	15.9	15.9	+0.0	+0.0	10.8	10.8	10.8	+0.0	+0.0					
Primary Metals	7.3	7.3	7.2	+0.0	+0.1										
Fabricated Metals	8.6	8.6	8.7	+0.0	-0.1										
Machinery	65.7	65.7	63.9	+0.0	+1.8	52.3	52.2	50.8	+0.1	+1.5					
Other Durable Goods	56.9	56.8	57.6	+0.1	-0.7	39.8	39.5	39.2	+0.3	+0.6					
Aircraft and Missiles	26.3	26.6	27.7	-0.3	-1.4										
Lumber and Wood Products (Except Furniture)	8.7	8.5	8.5	+0.2	+0.2										
All Other Durable Goods	21.9	21.7	21.4	+0.2	+0.5										
Nondurable Goods	42.7	42.4	40.7	+0.3	+2.0	30.5	30.2	28.5	+0.3	+2.0	5.7	5.6	5.5	+0.1	+0.2
Food and Kindred Products	9.3	9.2	8.7	+0.1	+0.6	6.3	6.3	5.9	+0.0	+0.4					
Apparel	4.8	4.8	4.6	+0.0	+0.2	3.7	3.7	3.3	+0.0	+0.4					
Printing and Publishing	16.3	16.2	16.3	+0.1	+0.0	11.5	11.5	11.6	+0.0	-0.1					
All Other Nondurable Goods	12.3	12.2	11.1	+0.1	+1.2	9.0	8.7	7.7	+0.3	+1.3					
Mining and Quarrying	12.0	11.9	11.4	+0.1	+0.6	0.6	0.6	0.6	+0.0	+0.0	1.8	1.7	1.6	+0.1	+0.2
Copper Mining	9.0	8.9	8.4	+0.1	+0.6										
Other Mining and Quarrying	3.0	3.0	3.0	+0.0	+0.0										
Construction	94.7	93.9	104.1	+0.8	-9.4	63.3	62.7	70.3	+0.6	-7.0	18.5	18.5	19.8	+0.0	-1.3
Trans., Communications, and Public Utilities	73.4	74.4	71.2	-1.0	+2.2	50.4	50.5	48.3	-0.1	+2.1	9.6	9.6	9.5	+0.0	+0.1
Transportation	37.2	37.2	35.6	+0.0	+1.6	26.7	26.7	25.5	+0.0	+1.2	4.7	4.8	4.8	-0.1	-0.1
Communications and Public Utilities	36.2	37.2	35.6	-1.0	+0.6	23.7	23.8	22.8	-0.1	+0.9	4.9	4.8	4.7	+0.1	+0.2
Trade	346.5	346.8	338.3	-0.3	+8.2	234.0	234.0	229.8	+0.0	+4.2	57.1	57.2	55.1	-0.1	+2.0
Wholesale Trade	69.6	69.9	67.4	-0.3	+2.2	54.8	54.7	53.5	+0.1	+1.3	8.2	8.2	7.8	+0.0	+0.4
Retail Trade	276.9	276.9	270.9	+0.0	+6.0	179.2	179.3	176.3	-0.1	+2.9	48.9	49.0	47.3	-0.1	+1.6
General Merchandise and Apparel	42.3	42.3	42.0	+0.0	+0.3	27.0	27.1	27.2	-0.1	-0.2	7.3	7.3	7.2	+0.0	+0.1
Food Stores	45.6	45.5	43.3	+0.1	+2.3	29.2	29.0	27.8	+0.2	+1.4	7.7	7.7	7.3	+0.0	+0.4
Automotive and Service Stations	32.9	32.9	32.2	+0.0	+0.7	20.4	20.3	20.0	+0.1	+0.4	5.6	5.6	5.4	+0.0	+0.2
Eating and Drinking Places	99.5	99.7	97.0	-0.2	+2.5	64.0	64.2	62.3	-0.2	+1.7	18.2	18.4	17.7	-0.2	+0.5
Other Retail Trade	56.6	56.5	56.4	+0.1	+0.2	38.6	38.7	39.0	-0.1	-0.4	10.1	10.0	9.7	+0.1	+0.4
Finance, Insurance, and Real Estate	93.3	93.9	94.5	-0.6	-1.2	74.1	74.4	75.0	-0.3	-0.9	12.4	12.5	12.7	-0.1	-0.3
Services and Miscellaneous	360.8	362.8	344.8	-2.0	+16.0	243.8	245.1	232.5	-1.3	+11.3	67.0	68.0	64.4	-1.0	+2.6
Hotels and Other Lodging Places	40.3	41.0	37.7	-0.7	+2.6	23.1	24.0	21.3	-0.9	+1.8	6.9	7.1	6.8	-0.2	+0.1
Business Services	78.5	78.1	75.5	+0.4	+3.0	63.1	62.7	60.4	+0.4	+2.7	10.9	11.1	10.9	-0.2	+0.0
Health Services	90.5	90.8	85.5	-0.3	+5.0	59.6	59.8	56.0	-0.2	+3.6	19.3	19.3	18.2	+0.0	+1.1
Other Services	151.5	152.9	146.1	-1.4	+5.4	98.0	98.6	94.8	-0.6	+3.2	29.9	30.5	28.5	-0.6	+1.4
Government	251.9	251.2	239.1	+0.7	+12.8	131.6	131.0	123.0	+0.6	+8.6	53.5	53.3	51.2	+0.2	+2.3
Federal	42.7	42.5	43.3	+0.2	-0.6										
State and Local	209.2	208.7	195.8	+0.5	+13.4										
School	123.5	123.8	115.0	-0.3	+8.5										

* Preliminary
** Labor force, unemployment, and employment are reported by place of residence.
*** Normal seasonal variations have been eliminated to reflect underlying economic trends.
NOTE Prepared in cooperation with the U.S. Department of Labor, Bureau of Labor Statistics.

-- Prepared by Arizona Department of Economic Security,Research Administration (CPS, 1/88)

Nonmetropolitan Counties
Labor Force and Employment
May 1988

	Apache	Cochise	Coco-nino	Gila	Graham	Green-lee	La Paz
CIVILIAN LABOR FORCE*	14,850	35,075	42,025	12,275	8,200	3,000	5,050
Total Unemployment	2,175	2,925	3,225	1,375	725	300	350
Rate	14.6%	8.3%	7.7%	11.2%	8.8%	10.0%	6.9%
Rate (Seas. Adj.)**	16.3%	8.4%	8.3%	11.7%	9.2%	10.8%	7.6%
Total Employment	12,675	32,150	38,800	10,900	7,475	2,700	4,700

THE ABOVE LABOR FORCE STATISTICS SHOULD NOT BE USED
FOR ECONOMIC ASSISTANCE PROGRAMS

	Apache	Cochise	Coco-nino	Gila	Graham	Green-lee	La Paz
TOTAL WAGE AND SALARY	15,425	25,175	38,875	10,600	5,375	2,925	3,300
Manufacturing	850	1,150	2,875	1,300	200	75	225
Mining & Quarrying	25	100	150	1,375	0	1,600	50
Construction	900	1,175	1,625	600	200	250	125
T.C.P.U.	1,950	1,575	2,400	400	150	50	100
Trade	1,550	5,425	9,150	2,375	1,650	225	1,075
F.I.R.E.	350	650	800	275	125	25	100
Services & Misc.	4,725	4,500	10,225	1,700	875	125	825
Government	5,075	10,600	11,650	2,575	2,175	575	800

	Mohave	Navajo	Pinal	Santa Cruz	Yavapai	Yuma
CIVILIAN LABOR FORCE*	30,500	26,125	37,900	9,825	35,900	44,800
Total Unemployment	1,800	2,750	3,325	975	2,100	10,725
Rate	5.9%	10.5%	8.8%	9.9%	5.8%	23.9%
Rate (Seas. Adj.)**	5.9%	12.0%	8.6%	11.1%	6.3%	20.4%
Total Employment	28,700	23,375	34,575	8,850	33,800	34,075

THE ABOVE LABOR FORCE STATISTICS SHOULD NOT BE USED
FOR ECONOMIC ASSISTANCE PROGRAMS

	Mohave	Navajo	Pinal	Santa Cruz	Yavapai	Yuma
TOTAL WAGE AND SALARY	22,150	20,450	30,600	9,500	24,850	26,075
Manufacturing	2,975	1,925	3,550	1,250	2,400	1,550
Mining & Quarrying	325	1,225	3,875	0	800	100
Construction	1,650	1,100	1,425	300	2,100	1,400
T.C.P.U.	1,200	1,800	1,225	550	850	1,150
Trade	6,100	4,050	5,375	4,000	6,625	7,800
F.I.R.E.	1,000	375	825	400	1,025	925
Services & Misc.	4,950	4,550	4,475	1,425	5,550	6,050
Government	3,950	5,425	9,850	1,575	5,500	7,100

* Adjusted to the Current Population Survey (CPS) to reflect place of residence.

** Seasonal adjustment not applicable for economic assistance programs.

T.C.P.U. = Transportation, Communications, and Public Utilities
F.I.R.E. = Finance, Insurance, and Real Estate

Prepared in conjunction with the U.S. Department of Labor, Bureau of Labor Statistics.

Arizona Labor Force and Employment for Economic Assistance Programs

May 1988

County	Civilian Labor Force	Employment	Unemployment	Rate
Statewide	1,628,641	1,534,595	94,046	5.8%
Apache	14,852	12,665	2,187	14.7
Cochise	35,065	32,141	2,924	8.3
Coconino	42,023	38,803	3,220	7.7
Gila	12,273	10,892	1,381	11.3
Graham	8,200	7,474	726	8.9
Greenlee	2,997	2,685	312	10.4
La Paz	5,042	4,692	350	6.9
Maricopa	1,012,747	966,136	46,611	4.6
Mohave	30,503	28,706	1,797	5.9
Navajo	26,119	23,364	2,755	10.5
Pima	310,392	295,718	14,674	4.7
Pinal	37,908	34,595	3,313	8.7
Santa Cruz	9,815	8,841	974	9.9
Yavapai	35,908	33,814	2,094	5.8
Yuma	44,794	34,066	10,728	23.9

These figures are the only official BLS labor statistics to be used for revenue sharing purposes. They are not designed to be used as economic indicators.

NOTE: Series for Yuma and La Paz counties start January 1983. Data are not comparable to any past series.

Arizona Unemployment Insurance Activities

April 1988

	April 1988	March 1988	April 1987	% Change From One Year Ago
Claimants Served*	30,088	32,112	33,128	-9.2%
Avg. Weeks Unemployed**	8.6	8.7	9.3	-7.3%
Benefits Paid*	$11,082,992	$13,067,323	$13,408,351	-17.3%
Trust Fund Balance	$428,704,738	$419,860,962	$387,344,859	10.7%

*All Programs **UI Only

Estimated Hours and Earnings of Production Workers in Selected Industries
Arizona

INDUSTRY	AVERAGE WEEKLY EARNINGS			AVERAGE WEEKLY HOURS			AVERAGE HOURLY EARNINGS		
	May* 1988	Apr. 1988	May 1987	May* 1988	Apr. 1988	May 1987	May* 1988	Apr. 1988	May 1987
Manufacturing	407.22	401.96	406.72	41.3	41.1	41.0	9.86	9.78	9.92
Aircraft & Missiles	INA	INA	522.86	INA	INA	42.2	INA	INA	12.39
Food & Kindred Prod.	340.02	360.30	409.77	39.4	39.9	43.5	8.63	9.03	9.42
Primary Metals	486.93	464.94	473.16	39.3	38.3	38.5	12.39	12.27	12.29
Machinery	407.11	401.57	389.86	42.1	41.7	40.4	9.67	9.63	9.65
Copper Mining	510.06	514.95	490.37	41.3	41.9	39.9	12.35	12.29	12.29
Construction	432.16	427.78	424.13	37.0	36.5	36.5	11.68	11.72	11.62
Utilities	615,46	636.01	602.93	42.3	42.8	42.4	14.55	14.86	14.22
Retail Trade**	242.39	244.94	243.20	32.8	33.1	32.6	7.39	7.40	7.46
Wholesale Trade	401.17	393.23	389.06	40.4	39.6	39.7	9.93	9.93	9.80

Estimated Hours and Earnings of Production Workers in Selected Industries
Maricopa County

INDUSTRY	AVERAGE WEEKLY EARNINGS			AVERAGE WEEKLY HOURS			AVERAGE HOURLY EARNINGS		
	May* 1988	Apr. 1988	May 1987	May* 1988	Apr. 1988	May 1987	May* 1988	Apr. 1988	May 1987
Manufacturing	431.38	429.11	428.69	41.8	41.5	41.3	10.32	10.34	10.38
Construction	453.00	447.60	435.24	37.5	36.9	36.3	12.08	12.13	11.99
Retail Trade**	267.00	270.06	269.47	33.5	33.8	33.6	7.97	7.99	8.02
Wholesale Trade	414.94	408.18	393.03	40.8	39.9	39.5	10.17	10.23	9.95

Estimated Hours and Earnings of Production Workers in Selected Industries
Pima County

INDUSTRY	AVERAGE WEEKLY EARNINGS			AVERAGE WEEKLY HOURS			AVERAGE HOURLY EARNINGS		
	May* 1988	Apr. 1988	May 1987	May* 1988	Apr. 1988	May 1987	May* 1988	Apr. 1988	May 1987
Manufacturing	376.55	374.01	346.89	38.9	39.0	38.5	9.68	9.59	9.01
Copper Mining	559.40	544.42	501.32	42.8	42.8	41.5	13.07	12.72	12.08
Construction	388.13	386.34	370.39	37.0	36.9	37.3	10.49	10.47	9.93
Utilities	568.37	574.75	526.51	41.7	41.8	40.1	13.63	13.75	13.13

* Preliminary.
** Excludes eating and drinking places.

NOTE: These estimates are based on a sample of full- and part-time production and related employees whose payroll and hours are reported for the pay period which includes the 12th of the month. Prepared in cooperation with the U.S. Department of Labor, Bureau of Labor Statistics.

1988 Occupational Employment Survey of TCPU, Trade, Education, and Government

The Occupational Employment Statistics (OES) program is a federal-state cooperative program to determine current occupational employment and to estimate future demand for occupational skills by industry. For 12 years, staff from the OES Unit of the Arizona Department of Economic Security have been collecting data with the support of the Arizona business community. Employment information developed by the OES program has established itself as an integral part of Arizona's education and manpower planning efforts. Career guidance counselors and students have access to the information on the microcomputer-based Occupational Information System. Other users are familiar with the Occupational Profile series covering Arizona's industries.

This year, the industries being surveyed are transportation, communications, and public utilities (TCPU); trade; education; and government. Larger employers will be contacted in person to collect the data. Employers with less than 100 employees may find it easier to complete the survey by phone rather than fill out a survey form. They may use our toll free number outside of the Phoenix area (1-800-321-0381) or call 255-3876 within the Phoenix area.

When the surveying is completed, the information is tabulated and organized, providing a clear representation of the occupational makeup of all Arizona industries. It is this information that is needed to develop an employment outlook for the years ahead--that is, which jobs are going to be in demand and which jobs are disappearing.

Luanne Evenson

New Developments

"New Developments" is featured each month as a service to employers and job seekers. It is a compilation of public announcements of the more significant new construction, grand openings, major hirings and layoffs, and other employer events that have special significance for Arizona labor markets. The announcements are paraphrased and otherwise edited from articles published in newspapers and other periodicals from throughout the state. "New Developments" is limited to space available, and no attempt is made to compile an exhaustive list of all such events that have occurred during the month.

AMUSEMENT - The Phoenix City Council has approved plans to build an open-air amphitheater near Union Hills Drive and Tatum Boulevard. The $6.5 million amphitheater will seat up to 18,000 people for plays and concerts. A nearby $1 million artisan village will have a collection of arts and crafts shops. Construction should be completed by next spring.

Construction will soon begin on a movie-production studio planned by Ripps Communications Co. for Scottsdale's new Horseworld equestrian center being built at 16601 North Pima Road.

EDUCATION - The PepsiCo Foundation will be contributing $1 million to the College of Business at Arizona State University in Tempe to establish an endowment for a fellowship support program. The program will target Hispanic and other minority students in their first year's work for a master of business administration (MBA) degree. Beginning with the 1989 fall semester, the program initially will support ten students.

Glendale High School, located at 6216 West Glendale Avenue, will be having a $3.3 million renovation. The construction contract includes a new 30,000-square-foot gymnasium, remodeling of existing administrative offices, the addition of covered walkways, and upgrading of the landscaping and parking lot areas.

FINANCE - Valley National Bank of Arizona has closed four branches since January as part of cost-cutting efforts. Between 150 and 200 jobs have been eliminated statewide through layoffs, early retirements, and voluntary resignations. The branches that have already closed were the Paradise Valley Mall and Gateway Center branches in Phoenix and the La Ronde and Sun Bowl branches in Sun City. Two other branches targeted for closing are the Seventh Avenue and Camelback Road branch in Phoenix and the Dodge Boulevard and Fort Lowell Road branch in Tucson.

MeraBank will be building a $30 million operations and computer center near Buckeye Road and the Squaw Peak Freeway in the city-owned Phoenix Sky Harbor Center, west of Sky Harbor International Airport. The four-building complex will contain 400,000 square feet of office space and employ about 1,500 people. Completion is scheduled for early 1990.

Construction is under way on a new headquarters for Coury Financial Services Inc. at the Mesa airport. The $2.3 million project will consist of four buildings with aircraft parking and direct taxiway to the airport's runway. Completion is scheduled for November.

AGRICULTURE - The Environmental Research Laboratory of the University of Arizona in Tucson, and Houston investor, Fred Alcorn, have announced plans to develop a $4.3 million commercial fish farm in Hyder, about 50 miles northwest of Gila Bend. The project will be the first commercial application in Arizona of aquaculture technology developed at the Tucson laboratory. The farm will raise 1.5 million pounds of tilapia (also known as St. Peter's fish) a year. A processing plant will be built at an undetermined location between Tucson and Gila Bend. The fish farm will employ 12 people and the processing plant between 25 and 30. The first fish should be ready for market in two years.

Cochise and Graham counties were declared a disaster area after a freeze on May 2 caused $12.6 million of agricultural damage. The freeze destroyed 90 percent of southeastern Arizona's apple crop and damaged pecans, pistachios, corn, and other crops. At least one of the three apple-packing houses will not operate this harvest season, eliminating more than 200 seasonal jobs.

ARIZONA BUSINESSES - Three Arizona firms made the list of Inc. magazine's 100 fastest-growing small public companies in the nation in terms of percentage-revenue increases. They are MicroAge Computer Stores Inc. of Tempe (ranked 32nd), America West Airlines of Phoenix (ranked 42nd), and Intermark Gaming International Inc. of Phoenix (ranked 53rd).

CONSTRUCTION AND DEVELOPMENT - Hildon Homes has two single-family subdivisions under construction. The Village at Madera Parc will consist of 99 homes, priced from $88,950 to $105,950, at the southeast corner of Cooper and Elliot roads in Gilbert. Sunset View will contain 129 homes from the low $80,000s at 77th and Peoria avenues in Peoria.

Northridge, a mixed-use project planned for a 136-acre site at Interstate 17 and Beardsley Road in the Valley, has been approved for a build-out of up to 4.9 million square feet with a value of about $750 million. The development will include office, retail, and light industrial space, a library, and a pedestrian mall.

Talavi, the Hopi word for sunrise, is the name of a mixed-use business park proposed for the southeast corner of 59th Avenue and Bell Road in Glendale. The estimated build-out would total about 1.6 million square feet of light industrial and office space and commercial use.

Construction has begun on Phase I of Centerpoint, a $150 million project to be located on 22 acres in downtown Tempe. Located on the southwest corner of Sixth Street and Mill Avenue, Centerpoint will consist of 560,000 square feet of office space, 200,000 square feet of retail space, a 300-room hotel, and 250 townhouses.

The 16th Street and Glendale Professional Office Complex is under construction in Phoenix. The $10 million complex will consist of two two-story buildings.

The Phoenix Planning Commission has approved rezoning of the Thomas Mall site at 44th Street and Thomas Road. The redevelopment project for the area, called Camelhead, will include 653,167 square feet of office space, a 324-room Pointe resort, 460 apartments and multifamily dwellings, an expanded library branch, 20 acres of open space, an outdoor theater, a child-care center, a fitness center, restaurants, movie theaters, and courtyards for art shows and other exhibits. The project will take 12 to 15 years to complete.

Construction is under way for the Brandywine Apartments at the northeast corner of 52nd Street and Oak in Phoenix. The $2 million, 80-unit complex will consist of four, four-story buildings with rental rates in the mid-range for the Valley.

Hewson Park at Southbank is an office and light-industrial complex under construction on the northwest corner of University Drive and 40th Street in Phoenix. The five-building complex will consist of more than 110,000 square feet of space.

Construction soon will begin on The Winfield House at 7227 East Second Street in downtown Scottsdale. The $17 million, life-care retirement facility will feature 163 private one- and two-bedroom residences, a 40-bed skilled-nursing center, and upscale social and recreational facilities.

Trammel Crow Homes will be developing two residential projects on 30 acres of land within Windmills West at Ray and McClintock roads in Chandler. Parkside Meadows will consist of 56 one- and two-story houses priced from $100,000 to $150,000. Parkside Estates will have 41 homes in the price range of $135,000 to $170,000.

Voters in Goodyear have approved a $15.5 million bond issue. The bonds will be used to improve parks, sewers, roads, public buildings, and other city services. Also approved was a primary property tax that will generate $300,000 for improvements in fire and police service.

Construction has begun on the new Communications Building for the City of Mesa at Sixth and North Center streets. The $3.5 million structure will contain the control center for the citywide communications network. A 195-foot tower and a 60-foot tower will be built as part of a microwave system.

Construction is expected to start in August on a $1.2 million government facility for both the Town of Buckeye and Maricopa County. The building will contain offices, a police department, a sheriff's substation, and an auto licensing division.

Arizona Labor Market Newsletter
LABOR MARKET INFORMATION PUBLICATIONS
Site Code 733A
P.O. Box 6123
Phoenix, Arizona 85005

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ARIZONA LABOR MARKET INFORMATION NEWSLETTER

Vol. XII No. 8
August 1988

Unemployment Rate

Seasonally Adjusted
June*

ARIZONA	5.8%
Maricopa County	4.7%
Pima County	4.7%
UNITED STATES	5.3%

Consumer Price Index

U.S. - May 1988
Base = 1982-84

Wage Earner/Clerical Worker -	116.2
% Chg. Year Ago	3.8
All Urban -	117.5
% Chg. Year Ago	3.9

Phoenix - 1st Qtr 1988
Base = 1982-84

All Urban -	117.4
% Chg. Year Ago	3.1

Tucson - 1st Qtr 1988
Base = 1982-84

All Urban -	120.8
% Chg. Year Ago	3.0

*Preliminary

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Arizona Department of Economic Security
— Moving People Toward Self-Sufficiency

Employee Leasing

The term "employee leasing" may sound a little strange to those unfamiliar with it. But this concept may well have great impact on the future of personnel management.

Employee leasing (also known as labor leasing or contract staffing) refers to a client company signing an agreement to lease employees on a permanent basis from another firm which has all responsibility for personnel, including recruitment, hiring, payroll, benefits, taxes, discipline, and union negotiations. If the company already has employees, the company's existing workers are hired by the leasing firm and leased back to the client company. The client pays one fee covering the cost of each employee plus a small operating margin.

The idea was introduced in 1972 as a means to solve personnel problems of administration, paperwork, recruitment, and turnover for small- and medium-size companies. In 1981, there were six leasing companies with 4,000 employees. By 1985, there were at least 200 companies with 60,000 employees. One estimate for 1987 runs as high as 310,000 leased employees.

The Employee Retirement Income Security Act (ERISA) was enacted in 1974 to require employers to provide the same benefits and retirement plans to all employees. Nevertheless, the Tax Equity and Fiscal Responsibility Act (TEFRA) of 1982 had a safe harbor provision [Section 414(n)] allowing a company to set up a tax-deferred pension plan for its nonleased principals to which the company could contribute as much as 200 percent of salary, as long as the leasing firm offered employees pension benefits equivalent to at least 7.5 percent of salary with 100 percent immediate vesting. A large portion of an owner's profits could then be sheltered from taxes. The owner could set up a generous retirement plan or other tax-sheltered benefits for him- or herself without providing similar benefits for all employees.

There were few employee leasing firms before TEFRA. The Internal Revenue Service authorized them under private letter rulings which included the legal requirements that the employee leasing company have ultimate control over employees and be a specific business unto itself and that the employees of the leasing company be employees for all purposes of the company.

TEFRA provided a more specific definition of leased employees and employee leasing. A leased employee was defined as a person who provides services to a recipient on a substantially full-time basis for at least one year pursuant to an agreement between the recipient and the leasing organization. Such services must be of a type historically performed by employees in the business field of the recipient.

Lawyers and accountants began to warn that the potential for misconduct by leasing companies was great because of the high cash volume and limited actual assets of leasing companies. In fact, several large leasing firms actually failed in late 1983.

In 1984, the National Staff Leasing Association set forth the following code of ethics for its members:

- Provide uniform benefits to all employees.
- Accept legal responsibility for payroll and employee benefits.
- Disallow the acceptance of client deposits.

- Adhere to all applicable ERISA provisions and common-law employment practices.

National Staff Network was also formed in 1985 as a nationwide network of leasing companies that adhere to strict self-imposed guidelines.

It was also realized that TEFRA did not hinder improper employee leasing business practices among client companies. Therefore, the Deficit Reduction Act of 1984 and new IRS regulations will void leasing arrangements entered purely to skirt pension responsibilities. The IRS regulations specify the types of employees who can be excluded from, or included in, any plan based on a leased employee model before the plan will qualify for favorable tax treatment.

ADVANTAGES TO EMPLOYERS

Personnel administration and record keeping are transferred to the leasing firm, thereby reducing non-productive employee time. These costs could otherwise add up to as much as 4 to 10 percent of a small company's gross payroll.

A leasing company is able to qualify for large group discounts on health care coverage and life insurance because it pools employees from all client companies. A better benefits package makes the client more competitive with major corporations and reduces turnover. A 1983 industry study of 2,000 leased employees found that the turnover rate was reduced as much as 45 percent because of the better benefits and job security offered.

Employee leasing can also be especially useful in the following situations:

- Personnel areas in which a certain expertise is required.
- Specific project work in which exact costs must be identified.
- Personnel development in geographic areas outside the company's normal operating area.
- In personnel-related situations where isolation from the rest of the company is preferred.

ADVANTAGES TO EMPLOYEES

Employee leasing can offer a better and more comprehensive benefits package than is often available from a small company.

A leased employee has better job security. If a client needs to reduce staff, the employee might be reassigned to another client.

Employees have more position flexibility. The leasing company may be able to assist an employee wanting to change positions by locating a new position with a different client with no change in benefits.

DISADVANTAGES TO EMPLOYERS

Although employee leasing may be quite beneficial for many firms, it is not the best idea for some. Small businesses may lose tax credits and incentives offered by the federal government for employment of targeted employee groups. In addition, the client's work force is dependant on the economic stability of another company, making it imperative that a company check out the financial condition of a prospective leasing firm as much as possible.

Another problem involves the overlap of employee supervision. Although the leasing company technically employs the workers, few clients want to surrender the control and supervision of the workers and how their jobs get done. Therefore, an owner would not want to fire him- or herself and then be leased back to the company, even though doing so would avoid problems caused by overlapping supervision. The issue of joint employers is a concern in cases of liability.

The U.S. Court of Appeals in Philadelphia found in NLRB vs. Al Bryant, Inc. (711 F.2nd 543, 1983) that one employer, while contracting in good faith with an otherwise independent company, retained for itself sufficient control of the terms and conditions of employment of the workers who were employed by the other employer.

A finding of joint employer means that problems of the leasing company become problems of the client company. For purposes of labor law and, and to some extent tax law, there has been no separation of employees from the client company.

PRECAUTIONS FOR EMPLOYERS

Redeker and Castagnera, labor attorneys, suggest that companies wanting to lease employees do the following:

- Look for an established company with well-defined personnel practices and policies, because they are less likely to go bankrupt.
- Each part's personnel responsibilities should be clearly defined in the leasing contract. Even though there is no set of policies and practices that will eliminate joint employer problems, a clear division of responsibilities will establish which entity made particular decisions. Nevertheless, federal and state laws may require the retention of significant control over certain employees.
- Lease managers as well as rank and file and give responsibility for day-to-day decisions to these managers.
- Choose a leasing firm that has the general practice of transferring, rather than discharging, employees who do not work out with one client.

Paul C. Driskell of Translabor Leasing Corporation also has some advice for selecting a leasing firm:

- Find out how long the firm has been in business.
- Ask to see a client reference list.
- Find out exactly what the leasing company provides.
- Ask to meet the prospective field service representative.
- Do not consider a firm without service locations in reasonable proximity to the employees it will provide.
- Do not do business with a company that is not financially solvent.
- Do not hire a firm with no knowledge of your industry.
- Ask if the leasing firm has an existing employee relations and safety program.
- Compare prices and services.
- Insist on regular service reports or meetings with the account executive.

Barbara Keene

SOURCES:

Paul C. Driskell, "A Manager's Checklist for Labor Leasing," Personnel Journal, October 1986.

Tammy Linn, Eide Helmeke & Co.; Joe Powell and Carmen Powell, M & P Leasing, Inc., interview in October 1987.

Michael J. McCarthy, "Employee Leasing Lives, Despite Predictions," The Wall Street Journal, June 1, 1988.

James R. Redeker and James O. Castagnera, "The Legal Nightmares of Employee Leasing," Personnel Journal, February 1985.

Marvin R. Selter, "On the Plus Side of Employee Leasing," Personnel Journal, April 1986.

LMI Publications--Hot off the Press

The following recently revised publications prepared by the DES Research Administration can be ordered from the address on the back of this newsletter or by calling (602) 255-3871. One copy of each publication will be sent at no charge. Multiple copies are available at a nominal charge to help cover the cost of printing. Other DES offices can order these publications directly from DES Supply.

Arizona Occupational Profile: Educational Services (PAL-442) and Arizona Occupational Profile: Hospitals (PAL-332) are two in a series of publications produced from information obtained through the Occupational Employment Statistics (OES) survey. These profiles, published every three years, list estimated employment levels of occupations in the educational services and hospitals industries.

In addition to current estimates, occupational projections for 1989 (educational services) or 1990 (hospitals) of the number of job openings due to growth and separations are included at both state and county levels. An analysis of trends in the industry and its occupations is also in each book. These books are valuable for job seekers, public and private administrators, and those involved in training, recruiting, and counseling.

The educational services industry, for purposes of this publication, consists of establishments providing academic or technical instruction, including elementary and secondary schools; colleges, universities, and technical schools; libraries and information centers; and correspondence and vocational schools. Not included are beauty schools, barber colleges, and establishments providing job training and vocational rehabilitation services.

Hospitals include establishments primarily engaged in providing diagnostic medical services, extensive medical treatment including surgery, continuous nursing care, and academic and research activities. These hospitals have the facilities, staff, and equipment to provide comprehensive health care to patients requiring either acute or rehabilitative care. Not included are offices of health care practitioners, nursing and personal care facilities, medical and dental laboratories, and outpatient care facilities.

The Sample Resume (RS-016) is a one-page example of what a well-prepared resume might look like. This sheet is helpful for job seekers and career counselors.

Poll Identifies Need for Career Planning Assistance

Young people and other workers planning their work lives are getting too little assistance according to a survey by the Gallup Organization of Princeton, New Jersey, on behalf of three interested national organizations. The National Career Development Association, the National Occupational Information Coordinating Committee, and the National Center for Research on Vocational Education commissioned the Gallup Organization to conduct a survey in November 1987.

Subjects of the survey were career planning, use of occupational information, attitudes toward work, and perceived usefulness of certain experiences in preparation for work. Gallup surveyed a representative national cross section of 1,006 adults, 18 and over.

An overwhelming need for assistance in career planning and use of information was apparent from those responding. Here are some of the highlights of the survey findings:

- Only about 39 percent said they had a career plan to begin with, and 64 percent said that if they could start over, they would get more information about their potential choices.
- About 15 percent of those who needed help did not know where to go. Nearly 2 1/2 times as many blacks as whites gave this response.
- Friends and relatives were the most relied upon sources of assistance, especially by many of the workers who are apparently unhappy in their current positions.
- One-third used professional counselors in their planning. Only about one-fifth of the women and black Americans surveyed used professional assistance.
- One-third said that adults have access to the kind of information they need to make career choices, but 55 percent disagreed.
- Nearly half said that, even if information is available, adults do not know how to use it.
- Nearly 38 percent engaged in self-directed activities when choosing and changing jobs.
- High school graduates believed that their basic educational skills courses were the most important preparatory experience for work, but for those who had received technical training, that training was rated as being as important as the basic skills courses.
- Poor career planning may also account for much of the career change.

An additional interesting finding of the survey was that 14 percent of full-time workers and 20 percent of black workers reported that they had been asked by their employers to do something illegal or unethical on the job. One-third of those asked to perform illegal or unethical acts did so, 47 percent refused, and 12 percent pretended to cooperate, but did not. Six percent quit their jobs rather than cooperate.

To receive more information about this survey, as well as about other related reports and research studies, request the 100-page monograph that will be available after January 1989 from E. Neil Carey, Executive Director, National Career Development Association, 10214 Blanford Way, Ellicott City, MD 21043.

The Arizona Labor Force in June

June's statistics revealed the contrast between Arizona's economic performance and the nation's. The state's unemployment rate remained steady at 5.8 percent while the nation's dropped to 5.3 percent, its lowest point in 14 years. The over-the-year job growth pace nationwide is a strong 3.7 percent compared to Arizona's feeble 1.8 percent growth. Additionally, the nation's job growth was spread across the board, but nearly every sector of Arizona's economy displayed a lack of genuine strength.

Arizona's economic performance in June was dismal. A total of 25,700 wage and salary jobs were lost, the worst June showing on record. While most of the loss is attributable to the drop in school employment for summer vacation, losses also occured in finance, insurance, and real estate (FIRE); transportation, communications, and public utilities (TCPU); services; and trade. Manufacturing and construction realized gains, but the prospects for these industries are dim.

While the construction employment leap of 1,400 in June seems encouraging, particularly in light of last month's gain of 700 jobs, the outlook for the industry is glum. June's job growth was a continuation of the seasonal summer upswing, but the gain was smaller than normal. Also, the drop in the U.S. unemployment rate to 5.3 percent has ignited fears that the economy is over-heating, causing inflationary pressures or at least inflationary expectations. In response to this, the Federal Reserve has tightened its reigns on monetary policy, sparking higher interest rates. This will have a further negative impact on the already lethargic residential construction industry. The recent upsurge in construction is not expected to last beyond the summer when the industry will resume its decline.

Manufacturing employers added 500 jobs in June, for a fourth straight month of growth; however, over-the-year growth in manufacturing employment is a scant 1.2 percent. Manufacturing of building materials has been sluggish, as expected, because of the decline in the construction industry. Defense-related manufacturing was also expected to have a difficult year with the tightening of the federal budget. On the other hand, it was anticipated that high-tech manufacturing would pull up the slack in the manufacturing sector with increased export activity as the value of the dollar fell. Unfortunately, Arizona's manufacturers have not realized any substantial gains as the dollar fell. With impending layoffs in this sector and the dollar on the rise, the outlook appears not as promising as had been expected.

The prospects on the service-producing side of the economy are not any better. It is typical to see declines in service-related employment at this time of the year, but in June these declines were steeper than usual. TCPU fell by 100 as public utilities maintained their cautious stance toward the future. Trade fell by 1,900 with losses in both the wholesale and retail categories. FIRE had an unprecedented seventh month of decline, as both the real estate and financial sectors continued to struggle. In the near term, the performance of the service-related industries should improve over June's showing. However, with slowed in-migration and the economy in the doldrums, the performance is not expected to be gangbusters.

If present conditions persist into the second half of the year, the state will realize the slowest job growth since the 1982 recession. While a recession is not looming on the horizon, the outlook for the state's economy is deteriorating, and we should see the unemployment rate rising as the year progresses.

Rosemary Reardon

Arizona Labor Force and Employment

Arizona Labor Force and Employment

June 1988 (in thousands)

	ARIZONA					MARICOPA COUNTY					PIMA COUNTY				
				-- Amt Change --					-- Amt Change --					-- Amt Change --	
	Jun.* 1988	May. 1988	Jun. 1987	May. to Jun.	1987 to 1988	Jun.* 1988	May. 1988	Jun. 1987	May. to Jun.	1987 to 1988	Jun.* 1988	May. 1988	Jun. 1987	May. to Jun.	1987 to 1988
TOTAL CIVILIAN LABOR FORCE**	1623.3	1633.1	1609.1	-9.8	+14.2	1010.5	1015.6	999.4	-5.1	+11.1	306.2	311.3	305.7	-5.1	+0.5
Total Unemployment	98.8	94.4	106.2	+4.4	-7.4	48.5	46.9	53.2	+1.6	-4.7	14.7	14.7	15.3	+0.0	-0.6
Rate	6.1	5.8	6.6	---	---	4.8	4.6	5.3	---	---	4.8	4.7	5.0	---	---
Rate (Sea. Adj.)***	5.8	5.8	6.4	---	---	4.7	4.7	5.2	---	---	4.7	4.9	5.0	---	---
Total Employment	1524.5	1538.7	1502.9	-14.2	+21.6	962.0	968.7	946.2	-6.7	+15.8	291.5	296.6	290.4	-5.1	+1.1

The Above Labor Force Statistics Should Not Be used for Economic Assistance Programs

NONAGRICULTURAL WAGE AND SALARY EMPLOYMENT BY PLACE OF WORK

NONAGRICULTURAL WAGE AND SALARY EMPLOYMENT BY PLACE OF WORK

	ARIZONA					MARICOPA COUNTY					PIMA COUNTY				
	Jun.* 1988	May. 1988	Jun. 1987	May. to Jun.	1987 to 1988	Jun.* 1988	May. 1988	Jun. 1987	May. to Jun.	1987 to 1988	Jun.* 1988	May. 1988	Jun. 1987	May. to Jun.	1987 to 1988
TOTAL WAGE AND SALARY	1394.5	1420.2	1370.3	-25.7	+24.2	921.6	934.9	906.4	-13.3	+15.2	243.4	250.3	242.8	-6.9	+0.6
Manufacturing	189.3	188.8	187.0	+0.5	+2.3	138.4	138.2	135.3	+0.2	+3.1	30.2	30.3	31.3	-0.1	-1.1
Durable Goods	146.6	146.1	146.1	+0.5	+0.5	108.2	107.7	106.6	+0.5	+1.6	24.5	24.7	25.7	-0.2	-1.2
Stone, Clay and Glass	7.5	7.4	8.1	+0.1	-0.6	4.8	4.8	5.3	+0.0	-0.5					
Primary and Fabricated Metals	15.8	15.9	16.0	-0.1	-0.2	10.8	10.8	10.8	+0.0	+0.0					
Primary Metals	7.3	7.3	7.2	+0.0	+0.1										
Fabricated Metals	8.5	8.6	8.8	-0.1	-0.3										
Machinery	66.0	65.8	64.1	+0.2	+1.9	52.4	52.3	51.0	+0.1	+1.4					
Other Durable Goods	57.3	57.0	57.9	+0.3	-0.6	40.2	39.8	39.5	+0.4	+0.7					
Aircraft and Missiles	26.5	26.4	27.6	+0.1	-1.1										
Lumber and Wood Products (Except Furniture)	8.7	8.6	8.6	+0.1	+0.1										
All Other Durable Goods	22.1	22.0	21.7	+0.1	+0.4										
Nondurable Goods	42.7	42.7	40.9	+0.0	+1.8	30.2	30.5	28.7	-0.3	+1.5	5.7	5.6	5.6	+0.1	+0.1
Food and Kindred Products	9.4	9.3	8.8	+0.1	+0.6	6.3	6.3	6.0	+0.0	+0.3					
Apparel	4.6	4.7	4.5	-0.1	+0.1	3.6	3.7	3.3	-0.1	+0.3					
Printing and Publishing	16.3	16.3	16.1	+0.0	+0.2	11.4	11.5	11.3	-0.1	+0.1					
All Other Nondurable Goods	12.4	12.4	11.5	+0.0	+0.9	8.9	9.0	8.1	-0.1	+0.8					
Mining and Quarrying	12.1	12.0	11.5	+0.1	+0.6	0.6	0.6	0.7	+0.0	-0.1	1.8	1.8	1.6	+0.0	+0.2
Copper Mining	9.0	9.0	8.4	+0.0	+0.6										
Other Mining and Quarrying	3.1	3.0	3.1	+0.1	+0.0										
Construction	96.0	94.6	105.2	+1.4	-9.2	64.6	63.4	70.7	+1.2	-6.1	18.5	18.5	20.1	+0.0	-1.6
Trans., Communications, and Public Utilities	73.3	73.4	71.9	-0.1	+1.4	50.3	50.4	48.9	-0.1	+1.4	9.5	9.6	9.5	-0.1	+0.0
Transportation	37.2	37.2	36.2	+0.0	+1.0	26.6	26.7	25.8	-0.1	+0.8	4.7	4.8	4.8	-0.1	-0.1
Communications and Public Utilities	36.1	36.2	35.7	-0.1	+0.4	23.7	23.7	23.1	+0.0	+0.6	4.8	4.8	4.7	+0.0	+0.1
Trade	344.3	346.2	337.8	-1.9	+6.5	232.4	233.8	230.1	-1.4	+2.3	56.9	57.0	54.6	-0.1	+2.3
Wholesale Trade	69.3	69.6	68.1	-0.3	+1.2	54.7	54.8	54.2	-0.1	+0.5	8.3	8.2	7.8	+0.1	+0.5
Retail Trade	275.0	276.6	269.7	-1.6	+5.3	177.7	179.0	175.9	-1.3	+1.8	48.6	48.8	46.8	-0.2	+1.8
General Merchandise and Apparel	42.0	42.3	41.8	-0.3	+0.2	26.8	27.0	27.1	-0.2	-0.3	7.2	7.3	7.2	-0.1	+0.0
Food Stores	45.3	45.6	42.7	-0.3	+2.6	28.9	29.2	27.3	-0.3	+1.6	7.6	7.7	7.1	-0.1	+0.5
Automotive and Service Stations	33.3	33.0	32.7	+0.3	+0.6	20.6	20.4	20.5	+0.2	+0.1	5.7	5.6	5.4	+0.1	+0.3
Eating and Drinking Places	98.1	99.2	96.1	-1.1	+2.0	63.0	63.8	62.0	-0.8	+1.0	18.0	18.2	17.3	-0.2	+0.7
Other Retail Trade	56.3	56.5	56.4	-0.2	-0.1	38.4	38.6	39.0	-0.2	-0.6	10.1	10.0	9.8	+0.1	+0.3
Finance, Insurance, and Real Estate	93.0	93.3	95.6	-0.3	-2.6	73.9	74.0	76.0	-0.1	-2.1	12.4	12.5	12.8	-0.1	-0.4
Services and Miscellaneous	358.1	359.5	344.3	-1.4	+13.8	241.7	242.6	231.5	-0.9	+10.2	66.4	67.1	64.3	-0.7	+2.1
Hotels and Other Lodging Places	39.6	40.1	36.4	-0.5	+3.2	22.5	23.0	20.1	-0.5	+2.4	6.6	6.9	6.5	-0.3	+0.1
Business Services	77.2	77.7	75.4	-0.5	+1.8	61.7	62.3	60.2	-0.6	+1.5	11.0	11.0	10.9	+0.0	+0.1
Health Services	90.8	90.7	86.4	+0.1	+4.4	59.9	59.7	56.7	+0.2	+3.2	19.2	19.4	18.3	-0.2	+0.9
Other Services	150.5	151.0	146.1	-0.5	+4.4	97.6	97.6	94.5	+0.0	+3.1	29.6	29.8	28.6	-0.2	+1.0
Government	228.4	252.4	217.0	-24.0	+11.4	119.7	131.9	113.2	-12.2	+6.5	47.7	53.5	48.6	-5.8	-0.9
Federal	42.7	43.1	43.8	-0.4	-1.1										
State and Local	185.7	209.3	173.2	-23.6	+12.5										
School	97.2	123.5	90.5	-26.3	+6.7										

* Preliminary

** Labor force, unemployment, and employment are reported by place of residence.

*** Normal seasonal variations have been eliminated to reflect underlying economic trends.

NOTE Prepared in cooperation with the U.S. Department of Labor, Bureau of Labor Statistics.

-- Prepared by Arizona Department of Economic Security,Research Administration (CPS, 1/88)

Nonmetropolitan Counties Labor Force and Employment June 1988

	Apache	Cochise	Coco-nino	Gila	Graham	Green-lee	La Paz
CIVILIAN LABOR FORCE*	15,600	34,425	41,125	12,250	8,050	2,950	5,700
Total Unemployment	3,100	2,900	3,675	1,350	750	275	350
Rate	19.9%	8.4%	8.9%	11.0%	9.3%	9.3%	6.1%
Rate (Seas. Adj.)**	17.0%	8.3%	8.2%	10.9%	9.1%	9.7%	6.8%
Total Employment	12,500	31,525	37,450	10,900	7,300	2,675	5,350

THE ABOVE LABOR FORCE STATISTICS SHOULD NOT BE USED FOR ECONOMIC ASSISTANCE PROGRAMS

	Apache	Cochise	Coco-nino	Gila	Graham	Green-lee	La Paz
TOTAL WAGE AND SALARY	15,125	24,600	37,300	10,525	5,000	2,875	3,300
Manufacturing	875	1,150	2,875	1,325	200	75	275
Mining & Quarrying	25	100	150	1,375	0	1,600	50
Construction	1,000	1,200	1,625	600	200	225	125
T.C.P.U.	1,925	1,600	2,425	400	150	50	75
Trade	1,575	5,375	9,250	2,425	1,625	225	1,050
F.I.R.E.	350	650	800	275	125	25	100
Services & Misc.	4,625	4,525	10,525	1,750	875	125	825
Government	4,750	10,000	9,650	2,375	1,825	550	800

	Mohave	Navajo	Pinal	Santa Cruz	Yavapai	Yuma
CIVILIAN LABOR FORCE*	31,050	27,125	36,950	10,175	36,400	44,725
Total Unemployment	1,875	3,700	3,275	1,500	2,000	10,875
Rate	6.0%	13.6%	8.9%	14.7%	5.5%	24.3%
Rate (Seas. Adj.)**	6.2%	12.5%	8.3%	13.9%	5.8%	19.8%
Total Employment	29,175	23,425	33,675	8,675	34,400	33,850

THE ABOVE LABOR FORCE STATISTICS SHOULD NOT BE USED FOR ECONOMIC ASSISTANCE PROGRAMS

	Mohave	Navajo	Pinal	Santa Cruz	Yavapai	Yuma
TOTAL WAGE AND SALARY	22,175	20,375	29,100	9,225	24,900	25,000
Manufacturing	2,950	1,975	3,750	1,275	2,350	1,675
Mining & Quarrying	325	1,200	3,900	0	850	100
Construction	1,625	1,125	1,300	325	2,100	1,400
T.C.P.U.	1,225	1,775	1,225	550	875	1,150
Trade	6,175	4,125	5,250	3,775	6,675	7,450
F.I.R.E.	975	375	800	400	1,000	900
Services & Misc.	4,975	4,575	4,200	1,425	5,600	5,975
Government	3,925	5,225	8,675	1,475	5,450	6,350

* Adjusted to the Current Population Survey (CPS) to reflect place of residence.

** Seasonal adjustment not applicable for economic assistance programs.

T.C.P.U. = Transportation, Communications, and Public Utilities
F.I.R.E. = Finance, Insurance, and Real Estate

Prepared in conjunction with the U.S. Department of Labor, Bureau of Labor Statistics.

Arizona Labor Force and Employment for Economic Assistance Programs

June 1988

County	Civilian Labor Force	Employment	Unemployment	Rate
Statewide	1,623,259	1,524,411	98,848	6.1%
Apache	15,588	12,479	3,109	19.9
Cochise	34,424	31,529	2,895	8.4
Coconino	41,114	37,443	3,671	8.9
Gila	12,257	10,916	1,341	10.9
Graham	8,040	7,280	760	9.5
Greenlee	2,958	2,676	282	9.5
La Paz	5,697	5,346	351	6.2
Maricopa	1,010,532	962,002	48,530	4.8
Mohave	31,059	29,196	1,863	6.0
Navajo	27,137	23,425	3,712	13.7
Pima	306,207	291,522	14,685	4.8
Pinal	36,941	33,665	3,276	8.9
Santa Cruz	10,183	8,673	1,510	14.8
Yavapai	36,401	34,410	1,991	5.5
Yuma	44,721	33,848	10,873	24.3

These figures are the only official BLS labor statistics to be used for revenue sharing purposes. They are not designed to be used as economic indicators.

NOTE: Series for Yuma and La Paz counties start January 1983. Data are not comparable to any past series.

Arizona Unemployment Insurance Activities

May 1988

	May 1988	April 1988	May 1987	% Change From One Year Ago
Claimants Served*	29,850	30,088	32,333	-7.7%
Avg. Weeks Unemployed**	8.5	8.6	9.8	-12.7%
Benefits Paid*	$10,774,168	$11,082,992	$12,197,449	-11.7%
Trust Fund Balance	$455,194,848	$428,704,738	$416,190,852	9.4%

*All Programs **UI Only

Estimated Hours and Earnings of Production Workers in Selected Industries
Arizona

INDUSTRY	AVERAGE WEEKLY EARNINGS			AVERAGE WEEKLY HOURS			AVERAGE HOURLY EARNINGS		
	June* 1988	May 1988	June 1987	June* 1988	May 1988	June 1987	June* 1988	May 1988	June 1987
Manufacturing	406.55	404.48	404.50	41.4	41.4	40.9	9.82	9.77	9.89
Aircraft & Missiles	INA	INA	504.70	INA	INA	41.2	INA	INA	12.25
Food & Kindred Prod.	358.67	343.01	388.02	40.3	39.7	42.5	8.90	8.64	9.13
Primary Metals	489.75	488.43	472.23	38.9	39.2	37.9	12.59	12.46	12.46
Machinery	405.72	407.11	402.93	41.4	42.1	40.7	9.80	9.67	9.90
Copper Mining	498.17	510.06	495.32	40.7	41.3	40.5	12.24	12.35	12.23
Construction	429.02	437.47	419.80	36.7	37.2	36.6	11.69	11.76	11.47
Utilities	630.55	614.01	610.72	43.1	42.2	42.5	14.63	14.55	14.37
Retail Trade**	250.24	245.02	249.00	33.5	32.8	33.2	7.47	7.47	7.50
Wholesale Trade	396.73	394.71	385.12	40.9	40.4	39.5	9.70	9.77	9.75

Estimated Hours and Earnings of Production Workers in Selected Industries
Maricopa County

INDUSTRY	AVERAGE WEEKLY EARNINGS			AVERAGE WEEKLY HOURS			AVERAGE HOURLY EARNINGS		
	June* 1988	May 1988	June 1987	June* 1988	May 1988	June 1987	June* 1988	May 1988	June 1987
Manufacturing	428.49	430.73	428.49	41.4	41.9	41.4	10.35	10.28	10.35
Construction	444.46	459.56	435.63	37.1	37.7	36.7	11.98	12.19	11.87
Retail Trade**	273.70	270.21	276.68	34.0	33.4	34.2	8.05	8.09	8.09
Wholesale Trade	419.58	411.82	386.23	42.0	41.1	38.7	9.99	10.02	9.98

Estimated Hours and Earnings of Production Workers in Selected Industries
Pima County

INDUSTRY	AVERAGE WEEKLY EARNINGS			AVERAGE WEEKLY HOURS			AVERAGE HOURLY EARNINGS		
	June* 1988	May 1988	June 1987	June* 1988	May 1988	June 1987	June* 1988	May 1988	June 1987
Manufacturing	384.40	375.18	350.90	40.0	39.0	38.1	9.61	9.62	9.21
Copper Mining	531.30	559.40	515.34	42.2	42.8	42.0	12.59	13.07	12.27
Construction	378.67	387.32	362.60	36.8	37.1	36.7	10.29	10.44	9.88
Utilities	577.37	571.71	541.61	41.3	41.7	41.0	13.98	13.71	13.21

* Preliminary.

** Excludes eating and drinking places.

NOTE: These estimates are based on a sample of full- and part-time production and related employees whose payroll and hours are reported for the pay period which includes the 12th of the month. Prepared in cooperation with the U.S. Department of Labor, Bureau of Labor Statistics.

New Apprenticeship Report for Counseling and Planning

The Occupational Information System (OIS) of Arizona has released OIS Report Number 88-4: 1987 Arizona Apprenticeship Data by Classification of Instructional Program (CIP) Training Code and by County. This report is designed for use by vocational planners, career counselors, and vocational evaluators. The report lists for each training program the number of apprenticeship trainees at the beginning of the year; the number of new registrants, completions, and cancellations; and the number active in the program at the end of the year.

This report is also designed for use with the MICRO OIS vocational planning and career counseling database. The related Standard Occupational Classification (SOC) and OIS cluster codes are shown for each training program. Using the SOC code in the MICRO OIS, a one-page career profile may be prepared which reviews the duties and nature of work in each training area. The OIS cluster code used in conjunction with the MICRO OIS permits the easy preparation of a supply-demand report covering the training area under consideration.

For further information, contact Hugo H. Soll, Ph.D., Manager, OIS of Arizona, Site Code 733A, P. O. Box 6123, Phoenix, Arizona 85005, (602) 255-3680.

New Developments

"New Developments" is featured each month as a service to employers and job seekers. It is a compilation of public announcements of the more significant new construction, grand openings, major hirings and layoffs, and other employer events that have special significance for Arizona labor markets. The announcements are paraphrased and otherwise edited from articles published in newspapers and other periodicals from throughout the state. "New Developments" is limited to space available, and no attempt is made to compile an exhaustive list of all such events that have occurred during the month.

UTILITIES - Arizona Public Service Co. has laid off about 260 clerical, professional, and managerial employees. An additional 190 union workers covered by the International Brotherhood of Electrical Workers will be laid off by the end of July. About 390 positions had already been eliminated this year through attrition and cancellation of proposed jobs. The cutbacks are intended to reduce operating costs in response to an expected decline in revenue. The reduction in revenue is the result of increased competition among sellers of excess electricity and a slowdown in Arizona's economic growth.

RETAIL TRADE - Mega Foods will be opening at least six new stores in the Valley. Two of the warehouse supermarkets, at 43rd Avenue and McDowell Road and at 32nd Street and Greenway Road in Phoenix, will be open by October. Other stores will be built at Dobson and Warner roads in Chandler and at 59th and Peoria avenues in Glendale. The remaining two stores will be built in the east Valley.

Home Depot Inc. will be opening three more stores in the Valley. A store under construction at 67th Avenue and Bell Road in Glendale will be open by late November. Construction will begin this fall on a store at the southwest corner of Warner and Kyrene roads in Tempe. One more store is planned for Pima and Indian Bend roads in Scottsdale.

California-based El Pollo Loco is planning to open 25 charbroiled chicken stores in the Valley, eight in Tucson, and about five in other parts of Arizona within the next five years. The first store should open soon at the corner of McClintock and Guadalupe roads in Tempe. Another store at 43rd Avenue and Indian School Road in Phoenix is scheduled to open in August. Each store will employ about 30 people.

The O.P. Club Corp. has opened a warehouse-style office-product store at 1608 East Camelback Road in Phoenix and plans five more stores for the Valley. The second store will open soon at 43rd Avenue and Indian School Road in Phoenix and the next store at Southern and Country Club in Mesa by November or December. Three more stores will open in Phoenix by spring 1989. Each store employs about 15 workers.

HOTELS - The Wigwam in Litchfield Park is receiving a $19.3 million restoration and expansion. Expected to be completed by the end of September, the project includes redesigning the main lodge, refurbishing meeting rooms, expanding guest accommodations to 244 rooms, adding a stadium-style tennis court, and improving the three golf courses.

Construction will begin in spring 1989 on a $12.5 million Holiday Inn hotel and convention center in Flagstaff. The complex will be built on an eight-acre site near Northern Arizona University and is scheduled for completion in late summer 1990. Included in the project are a ten-story, 300-room hotel; a 1,000-seat convention center; and 12 conference rooms.

Construction is under way on the $25 million Orange Tree Golf & Conference Resort in Flagstaff. The 160-room resort will include a sports lounge, a restaurant, a video library of golf lessons, and meeting rooms. Completion is expected by the end of the year.

MANUFACTURING - Maricopa Refining Co. is planning to build an oil refinery in Mobile, about 25 miles northeast of Gila Bend. The refinery would use crude oil from a California-to-Texas pipeline. The refinery would employ 40 workers and process 30,000 barrels a day of crude oil into heating oil, gasoline, diesel fuel, and asphalt.

Sahuaro Petroleum & Asphalt Co. will be building a $10 million asphalt refinery south of Coolidge. The plant will employ about 60 people and produce up to 250,000 tons of asphalt a year. The crude oil will be obtained from the California-to-Texas pipeline. Construction will begin in March and take nine to 12 months to complete.

Amkraft Converters Inc. has opened a corrugated box manufacturing plant at 53rd Avenue and Buckeye Road in Phoenix. The 112,200-square-foot facility employs 75 to 85 workers.

The Air Force has awarded more than $39 million in contracts to the Garrett Engine and Garrett General Aviation Services divisions of Allied-Signal Aerospace Co. The contracts are part of a combat-flight inspection and navigation program designed to analyze the performance and accuracy of military ground-based navigational facilities in several countries, including Japan and West Germany.

The Navajo Nation has announced plans to establish a Navajo Technology Center in Leupp, about 35 miles northeast of Flagstaff, to work with the Pentagon, defense contractors, and other firms to develop computer software. The tribe aims to slow the "brain drain" of Navajo engineers, scientists, and other college graduates from the reservation. The Navajo Division of Labor has set up a three-year executive management program to train Navajos to run the technology center, which would be a private corporation. In addition, the tribe and the board chairman of Hewlett-Packard Co. will host a high-technology forum on the reservation this fall.

Hughes Aircraft Co. will be shifting 200 to 300 engineers, personnel who handle paper work and political contacts for major projects, and financial personnel from Canoga Park, California, to Tucson this fall. Headquarters, design, and development will remain in California, while manufacturing will be consolidated in Tucson.

EDUCATION - The following school-bond issues have been passed in Valley school districts:

- Pendergast Elementary School District--$16.5 million to build two new schools and remodel four existing schools.
- Gilbert Unified School District--$83.35 million for eight new elementary schools, one junior high, and one high school; districtwide construction and remodeling projects; and portable classrooms.

The University of Arizona in Tucson has been selected as a site for a Semiconductor Research Corp./Sematech microchip research center. The university requested $5.3 million over the next five years to establish the Center of Excellence for Contamination/Defect Assessment and Control. The center will develop methods for measuring and removing impurities in the gases, chemicals, and water used in making semiconductors; for controlling contamination in vacuum and plasma processing; and for identifying and analyzing defects caused by contamination. Four departments within the College of Engineering will be involved. The university also will receive $7 million from the National Aeronautics and Space Administration to develop mining on the moon, asteroids, and planets.

BEVERAGE CONTAINER RECYCLING - All 16 Beverage Industry Recycling Program (BIRP) centers in the state have been closed because of cash-flow problems. There had been five outlets in Phoenix, three in Tucson, and one each in Flagstaff, Prescott, Kingman, Holbrook, Globe, Sierra Vista, Yuma, and Lake Havasu City. The centers had employed about 50 people statewide.

UNEMPLOYMENT BENEFITS - The maximum weekly unemployment benefit has been raised from $135 to $145 effective June 30, 1988, and will increase by another $10 for a maximum $155 a week on June 30, 1989.

CONSTRUCTION - Groundbreaking has occurred for the realignment and paving of a U. S. Forest Service road that will connect Fairfield Snowbowl with Highway 180. The $4.8 million project is expected to take two years to complete.

A $15.7 million apartment complex is under construction at The Pointe on South Mountain in Phoenix. The 364-unit complex is scheduled for completion in May 1989.

Design Master Homes is developing two new subdivisions in Park Village at Val Vista and Guadalupe roads in Gilbert. The Park Series will consist of 131 houses, and the Village Series will have 138 homes.

Los Angeles-based Leisure Technology is planning to develop a $200 million retirement community in Marana. Plans call for the construction of about 1,500 houses west of Interstate 10 at North Silverbell Road. Construction is expected to begin by mid-1989 and take seven to ten years to complete.

Arizona Labor Market Newsletter
LABOR MARKET INFORMATION PUBLICATIONS
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